ALUCOBOND®

40 years of excellence

FROM A PIONEER TO THE SYNONYM


ALUCOBOND®
40
years
of excellence

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A Glance at the Future

Claus Leyting

Preface

by Claus Leyting, formerly President, PMU (Product Market Unit) Architecture, Alcan Composites

Back in 1969 I could not at all have imagined heading a small team 40 years later to put together this book about the history of ALUCOBOND® on the occasion of its 40th anniversary.

I had joined Aluminium Walzwerke Singen GmbH as a young salesman three years before and was in charge of exporting semi-finished aluminium products, like coils, sheets, circles and extrusions, to non-European countries. It was about early spring time that year when one afternoon two guys showed up in the office I was sharing with a colleague of mine responsible for Central European export sales. The two introduced themselves as members of the then very small ALUCOBOND® sales team which we learned had just been established a few weeks before. They placed a few stacks of one-sheet leaflets, printed black and white one side, on our desks and tried to explain to us what ALUCOBOND® was all about then. The leaflets simply showed a rectangular plate with numerous small holes punched into it and arranged in a way that they formed a picture of some kind. The leaflets were only differing in the pictures created by the holes and all were entitled 'bed mattress support panels'. We were asked to support the young ALUCOBOND® team by trying to sell such panels through the contacts we had in our export markets.

Not impressed by what we heard we rather felt a sort of pity for the two and for what they were trying to accomplish. My export business in particular was booming at that time in 1969, caused by financial loans the Federal German Government had granted to several Far East countries for imports of German goods. We sold aluminum sheets like 'hot cakes' and undoubtedly felt this was much more important 'to spend the time with' rather than 'wasting it' with this new product they called ALUCOBOND®.

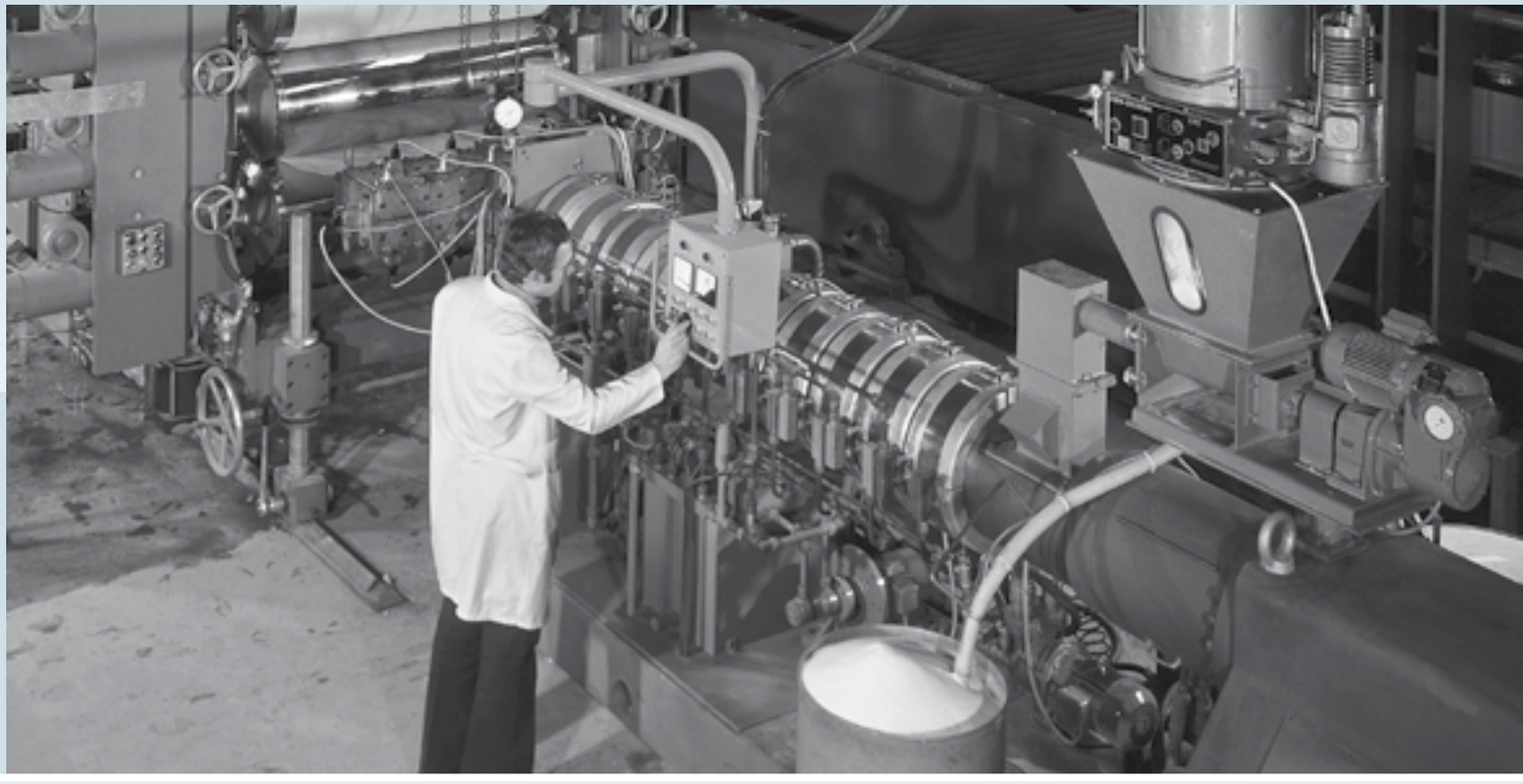
So, I do admit I shared the pessimistic view of the future of this new composite material with quite a number of people in the company at that time. No way could I have imagined then that only a few years later, during my assignment in South Africa, I would start promoting and successfully selling the product, and that, almost exactly 10 years after my first encounter with ALUCOBOND® in my Singen office, I would even accept to take up the sales and marketing responsibility for the product range manufactured in Germany; a step in my career which in the end turned out as the beginning of a most interesting 30 years liaison with the product until my retirement early 2008.

Looking back, I am extremely satisfied having been a member of the ALUCOBOND® team, or should I say 'ALUCOBOND® family', over so many years, lately as President of the truly global PMU Architecture. It is with great pride that, on behalf of Alcan Composites, we are presenting this anniversary book to all ALUCOBOND® friends and supporters, customers and business associates from around the globe, and to those interested to join the big 'family'.

The editorial team was primarily aiming at documenting the most significant milestones in the history of ALUCOBOND® and its '40 years of excellence' on the way 'From a Pioneer to the Synonym' for Aluminium Composite Material (ACM). We hope you will enjoy reading the ALUCOBOND® story and the many text contributions by authors from within and outside Alcan Composites, whom we would like to thank for sharing with us and all readers their experiences with the product and their memories of encounters with ALUCOBOND® and its teams around the globe.

1964

1969



Pilot line Neuhausen

Initial panel tests

Hans Peter Held

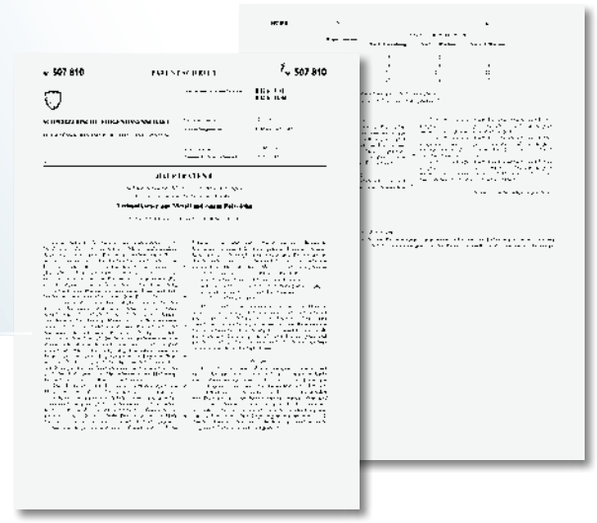
The Journey is not the Reward – From an Idea to a Marketable Product

by Hans Peter Held, formerly Communication Manager, Alusuisse, Zurich, Switzerland

In the decades of economic revival and technological innovations following World War II, the testing and application of new materials boosted the industrial development to a significant extent. This also applied to the aluminium industry which, at that time, was dominated by a small number of large producers. Amongst them was Alusuisse, a Swiss group that put the first aluminium smelter into operation in Europe in 1889 and since then was considered one of the pioneers for this light metal and who had gradually opened up a large number of application markets for it, i.e. in packaging and building construction, mechanical and electrical engineering and later in electronics, road and rail vehicle construction, and in the aerospace industry, just to mention the most important market segments. ***(In 2000 Alusuisse became part of Alcan, today Rio Tinto Alcan)***

During the years of the economic revival also Alusuisse was interested in innovations – not only in the field of alloy development – which were suitable to expand the product range offered to its customers and to develop the company's leading technological position. For good reasons, one, therefore, also closely monitored the developments in the prospering industry of the United States which, by tradition, is particularly open-minded for innovations. On the occasion of an information trip which took Dr. Dieter Altenpohl to the USA in autumn 1964, he became aware at Bell Telephone Laboratories (today Alcatel – Lucent) of a process for producing formable semi-finished composite material. His respective report induced Alusuisse's top management to form a workgroup at the end of 1964 to examine the possibilities for the adhesion of aluminium sheet to other substrate materials. The idea of optimizing the properties of a material by combining different materials marked the beginning of a long series of test and development programmes which Alusuisse invested in considerably during the following years.

In 1965, Dr. Dieter Altenpohl, together with his colleague Franz Luckey, visited Bell once again, where they became acquainted with the German expert Dr. Pohl. From him they learned that two companies in the USA were already planning the continuous production of composite materials and also already had specific ideas with regard to their possible fields of application. Good opportunities were perceived for these new, light-weight materials in caravan construction, in the production of prefabricated accommodation units for camping purposes or the army, in the production of housings of electrical or other apparatus, and in the construction of vehicles of all types, including ship-building and aircraft construction.



Patent Certificate
Switzerland

Dr. Dieter Altenpohl, who has also become well-known as the author of the industry's best-seller, 'Aluminium, seen from inside', had previously been the head of the etching foil production at Aluminium-Walzwerke Singen GmbH, a member of the Alusuisse Group, prior to the group management promoting him to manager of the development department in Zurich. The staff playing an important role for the future perspectives of the company also included departments in research and development of Alusuisse in Neuhausen at the Rhine Falls, as well as laboratories and testing operations at the production sites in Chippis and Fribourg in Switzerland. The company Cheminvesta, which also belonged to the group, was assigned the task of checking the possibilities to produce aluminium / plastic composite panels in Singen.

Samples of the aluminium / polyethylene composite panels, produced by Bell for testing, not only impressed the managers at the Alusuisse headquarters in Zurich, but also European companies engaged in vehicle construction. For the purpose of carrying out a series of tests, several companies specializing in bonding techniques were evaluated as development partners and a patent was registered by Alusuisse in April 1965 'for the combined hardening of composite panels after shaping of any kind'. Three types of plastics were focused on during the subsequent testing, i.e. polyethylene, polypropylene and PVC.

At the Alusuisse Research Institute in Neuhausen in a laboratory specially designed for this purpose, special tests began in autumn of 1966 relating, for instance, to methods of pretreating the aluminium and polyethylene, the use of different adhesives and the variation of time, pressure and temperature during the pressing process. Almost at the same time, the newly established department for composite material development, VME, engaged in its first market investigations.

In the meantime, good contacts had been established with BASF who, as a producer of plastics and adhesives, showed keen interest in cooperating with Alusuisse. During talks held in Ludwigshafen in January 1967, mutual interest in a cooperation was affirmed and proposals discussed for a continuous production.

Setbacks also had to be accepted

Tests at the BASF Technikum using aluminium sheets supplied from Singen showed that adhesion over a large surface area was possible, although the required flatness of the composite panels was not yet achieved. During a visit by the Alusuisse top management in Ludwigshafen, even BASF's own goods waggons clad with the new material, were introduced. During lunch on the occasion of this historic top-management meeting, the decision was made to work out an agreement for the future collaboration, whereby BASF was to supply the plastics and the adhesive film for the new composite product, and with Alusuisse to plan the construction of a plant for the continuous production of it at its site in Singen.

Shortly thereafter it became known that the BASF goods waggons clad with the composite panels failed to withstand a stipulated crash test. Thus the fate of this promising application appeared to be sealed. However, setbacks of this kind did not at all change the confidence and enthusiasm of the people believing in the future of this new material. Amongst the optimists was also Franz Luckey, who

had been commissioned by the group management with launching the composite material on the market, and as a result, he relocated from the group's Zurich headquarters to Singen.

Clearly defined contours

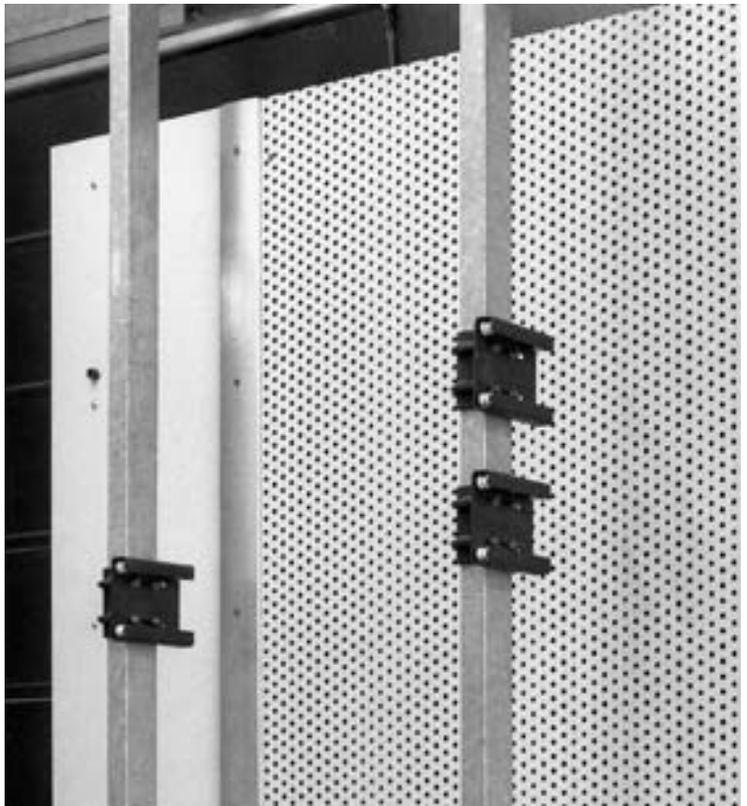
The progress reached in developing the material and the results of the 'educational' work performed on the market subsequently led to operational changes and an increase in efficiency, both in the research and the commercial areas.

The scientist Dr. Harald Severus had already been engaged by Alusuisse in summer of 1967 to provide technical support to another of the group's projects at the plants in the Wallis, but only a few months later, Dr. Altenpohl requested him to take over the management of the composite material team at the Research and Development Center in Neuhausen.

On September 27, 1967 Dr. Severus had the opportunity of giving a presentation at an Alusuisse management meeting on 'Aluminium-polyethylene composite semi-finished products'. In his presentation, he defined architecture, ship-building, aircraft construction, apparatus engineering and material handling as the most important target markets. The presentation also covered the subject of possible manufacturing processes, i.e customized press production, serial production with a platen press, and continuous production. The work on the project was to be continued in three phases: laboratory development, test operation and production. The presentation was accepted by the group management, and the further development of the product took on a more definite form.

From the laboratory to the market

Although an interest in composite materials was evident during the first contacts on the market there were also sceptics at group level – besides those who were in favour of it – who could not really imagine how their 'aluminium company' was to handle the new product. It, therefore, soon became clear to those responsible that high persuasive power would still be needed internally. They consequently invited representatives from the management, sales organization and the production sites to a colloquium on composite materials, that took place on January 10, 1968 in Neuhausen. A comprehensive report on the previous development work and all significant test results were submitted. As an external and independent expert, Dr. Ing. R. Taprogge from the Technical University of Aachen (later



Initial panel tests

professor for plastics technology at the University of Hamburg) could be won as a participant. He attested that composite panels were indeed a very interesting project but that a considerable effort was still required for optimizing the production methods, quality and application technologies.

The drive behind the activities associated with the new product gained momentum. In April 1968 the group management commissioned the plant in Singen to plan and order a continuous production line and to start developing the market in the Federal Republic of Germany. Technical and commercial committees were formed to report on the progress of the activities at regular intervals from now on. The list of topics was long and included the intermediate results of the technical development work, information on the status of the manufacturing line installation, communication with the sales departments, brand names, alternative metallic skin materials (instead of aluminium), cooperation with the suppliers of plastics and adhesives, surface design and extension of the application range. In May 1968 the ALUCOBOND® trademark was first registered in the Swiss Trade Mark Register and, during the following months, also in numerous other countries. Within the scope of a market study, more than 300 companies were visited in Central Europe in the course of 1968.

Fire protection regulations became an increasingly important topic during this time. It was to be examined whether a fire-test room could be set up near Neuhausen for carrying out experiments of practical relevance. At the same time, the research and development team worked on core material alternatives with different flammability properties, to the plastics used until then.

In September 1968 the first product information was printed: 'Aluminium-polyethylene-aluminium – a new composite material', aiming at informing the expert world at various exhibitions about the new product ALUCOBOND®.

On December 16, 1968 the new continuous production line went operational in Singen.

Period of proof

The various measures in the technical and commercial areas associated with the Alusuisse composite material clearly showed how complex the management tasks had become for ALUCOBOND®, particularly since the production plant in Singen was commissioned and the intensive market development began. The 'teething

Initial brand registrations

Plant Singen, Germany

problems' of the new production line sometimes triggered highly emotional internal discussions and correspondence. On the other hand, they were also an incentive for the development team in Neuhausen, to reach its goals faster. The team did a large number of tests with alternative materials on their own, whilst other tests were performed together with external companies.

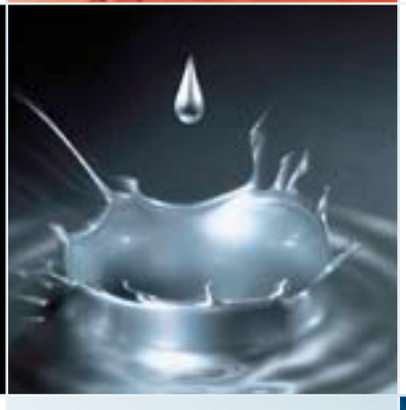
The construction of fire-testing facilities in the municipal region of Schaffhausen for conducting and assessing fire tests could now be started, and in the reports of the technical and commercial commissions in 1969, the topic of recycling the material was also discussed more and more frequently. Another goal for the continuous development work was thereby set.

Also in the direction of the media , Alusuisse finally emerged from the shadow with the product during that year with the publication of a Press Release in March 1969 entitled 'ALUCOBOND® – a new composite material'.

Dr. Harald Severus

What in fact is a composite ?

by Dr. Harald Severus, formerly Manager R&D Composites, Alusuisse, Neuhausen, Switzerland



History of the development of the materials

Since time immemorial, materials have played a considerable role in determining the development of mankind. We only need to think of the cultural epochs of the Stone Age, Bronze Age and Iron Age.

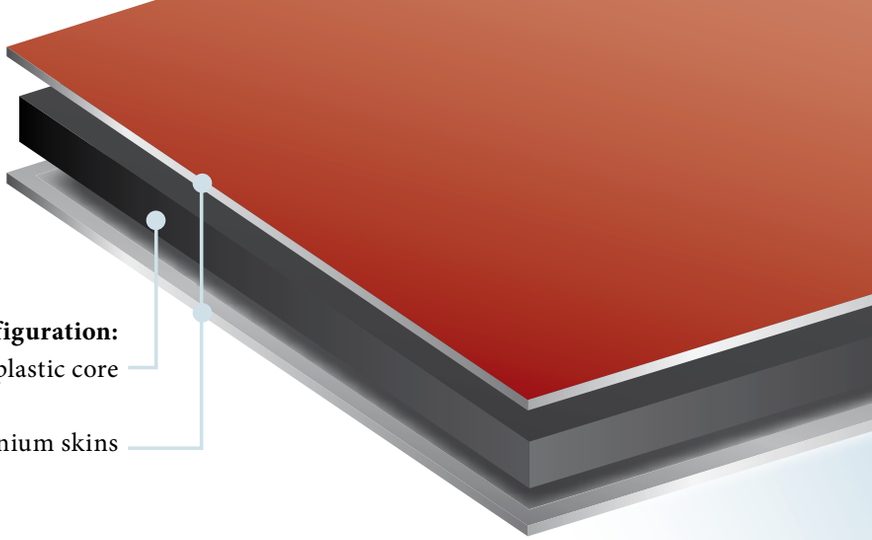
When looking back, we are able today to classify the development of materials under 4 main epochs, i.e.

1. materials found in nature: stone and wood
2. use of experience in producing materials: bronze, iron, ceramics
3. qualitatively scientific materials: aluminium, stainless steel, plastics
4. quantitatively scientific materials: reactor materials, semi-conductors, nano-materials, composites

During the first epoch, the 'materials specialist' was a collector and processor of natural substances.

During the second epoch, human beings passed on by word of mouth and applied the experience they made with fire, charcoal and wind for processing ore to metal, or baking clay.

During the third epoch, chemistry as a science then evolved from alchemy; this is manifest, e.g. in metallurgy as a special discipline of its own.



As a result of the work performed by physicists, chemists and metallurgists, a large number of materials (metal, plastics, ceramics) are available today, in the fourth epoch, in most different forms (as thin sheet, foils, fibres, granules, powder, nano-particles, moulds, slip, molten metal, etc.). The combination of these different materials opens up new perspectives that are utilized by materials science on the basis of the quantitative modelling laws.

Besides the development of materials, a large number of innovative technologies have established themselves during our era, such as those for lightweight construction, vehicle construction, packaging, the aerospace industry, information transmission, and many others. They have created needs for material properties that individual materials as such cannot fulfil. As a result of combining suitable materials, i.e. composites, requirements of this kind can be met, e.g. lightweight and rigid ease of processing formable, resistant to corrosion, physical and electrical properties depending on the special field, and many more.

There are four basic kinds of combination for composites which as such are easily visible to the naked eye or under a microscope, i.e.

- layers, e.g. decorative panels of wood and plastics-impregnated paper for furniture and interior construction, or roll-clad sheets of different metals for the chemical industry, coins or cooking utensils.
- fibres in matrix, e.g. with glass or carbon fibre-reinforced plastics (GFC or CFC) for vehicle construction and sports equipment.
- particles in matrix, e.g. ceramic particles in plastics and metals for increasing heat resistance.
- combination (layer + fibre + particles) or hybrid composites, e.g. particle-reinforced and fibre-reinforced moulded metal parts with vacuum-metallized, high-temperature resistant, corrosion-protection layers for turbine construction.

The characteristics of composites in general

As to their properties, composites are generally optimized for a certain application, and between the different individual components, also referred to as phases, they have a relatively large number of interfaces that demand highest attention to material development. The safety in use of these interfaces is decisive for a composite material. Here, application specialists who define the required properties have to work closely together with materials scientists who know the properties and manufacturing possibilities of the individual materials and the composite, with process and mechanical engineers who develop the appropriate production process on an industrial scale, testing engineers who examine the behaviour of prototypes under practical conditions and a quality assurance that guarantees the constant, defined properties.

ALUCOBOND® in particular

The composite ALUCOBOND® can be considered a plastic with excellent weather resistance because of its metallic skins or a metal with a very low weight. The ‘secret’ behind ALUCOBOND® is, that it combines aesthetically attractive, interesting, mechanical and physical properties with the ease of processing it.

As such it not only has a very specific application but also numerous fields of application – as composites otherwise do – that subsequently characterize it as a semi-finished product which a large number of fabricators in different industries use for their end products.

1969

2009

Coil coating line Singen

Al-coil

1969 – 1970

FROM A PIONEER TO THE SYNONYM

by Claus Leyting, formerly President, PMU (Product Market Unit) Architecture, Alcan Composites

The beginning was difficult, to say the least. The annual reports of the technical and commercial commissions at that time describe the problems that had not yet been solved. Thus, the first ALUCOBOND® panels produced on the continuous line in Singen in December 1968 left a lot to be desired as regards quality. Above all the bond adhesion and flatness were still unsatisfactory. Therefore, in the area of production the year 1969 was mainly characterized by specific changes made to the processes and adjustments to the production line, which then gradually brought improvements. Thus, at the end of the year these problems looked as if they had been solved and the progress striven for achieved.

Ernst Wismer

‘Small but fine’ – A Partnership with ALUCOBOND®

by Ernst Wismer, Entrepreneur, Ramser AG, Regensdorf, Switzerland

During my professional career and throughout the history of our company – a medium-scale metal-construction company – ALUCOBOND® has held a special position. 40 years ago our company was still located in Zurich-Altstetten, not far from ALLEGA AG, which formerly was part of the Alusuisse Group and operated as a metal-trading company.

Due to this neighbourhood and our common interest in the developments on our markets, close business contacts resulted during that time. These contacts enabled us to carry out orders that were not necessarily viable on a commercial basis but seemed particularly attractive to us due to their technical requirements. ALUCOBOND®, which was not a mature material at the time, fascinated us enormously as an alternative to conventional materials such as aluminium sheet, and with the ALLEGA salesman Emanuel ‘Manni’ Wolf as well as Franz Luckey, the person responsible for ALUCOBOND® in Singen then, we found congenial people who were convinced of the future of this new type of composite material.

I remember the first few years as a pioneer time, filled with problems and surprising solutions, with successes and failures. We could also contribute towards expanding the fields of application for ALUCOBOND®. With the excellent support from the Alusuisse Research and Development Centre in Neuhausen we managed to

However, mid 1970 a setback was experienced once again in the bond adhesion. Fortunately, the resulting production losses occurring during this phase could partly be compensated by production on the press in Neuhausen, and, with the support of BASF, this recurring problem could finally be put right relatively quickly thanks to a decisive modification in the bonding system.

Other path-breaking modifications to the continuous production line in Singen could also be completed at almost the same time, which led to significant improvements in the productivity and line speed, as well as a reduction in production scrap. This first production line in Singen was to experience many steps of modernization during the next 20 years or so, which all resulted in considerable increases in capacity and brought about improvements with each step.

In the commercial sector, the press release, ‘ALUCOBOND® – a new composite material’ was published in March 1969, which heralded the intensification of the marketing activities. The marketing during this early phase was still divided between a mini-team domiciled in Zurich/Neuhausen, of which ‘Mr. ALUCOBOND®’, Emanuel (Manni)

Furniture

TV-set casing

Exhibition booth

try out trend-setting fabrication techniques for the new material, i.e. bending, routing and folding – and to make it 'suitable' for metal construction. As the tools for the new techniques were not yet available on the market at that time, we were prepared to invent the necessary installations and to also construct them ourselves straight away.

Together with the Alusuisse department for application development in Zurich we worked on one or the other project in order to tap sales markets for this new composite material. Amongst others we tested its application for balcony balustrades (unfortunately at the beginning the panels were only available colour painted one side), for machine and equipment housing (and even today we are still supplying Bobst, a packaging-machine manufacturer, with ALUCOBOND® housings for certain production lines), and busied ourselves with furniture manufacture and shop-fittings which developed to become the first popular fields of application for ALUCOBOND® in the initial phase. We produced paper baskets and newspaper stands, and for a hotel in Zurich we designed elegant 3D-shaped ALUCOBOND® awnings covered in coloured leather.

Another ALUCOBOND® application originating from the earlier years and which indeed will only go down in history as a curiosity, was the casing of all 500 TV sets in the rooms of the modern Hotel Novapark in Zurich. This was to reduce the fire risk. Apparently the bad habit common at that time was for hotel guests to put out their burning cigarette ends on the television set.

Soon the construction of exhibition stands developed into an important field of application for ALUCOBOND®. I am somewhat proud that our small company managed to build an excellent coop-

1969 – 1970

Wolf, was a member, that concentrated on the EFTA countries at that time (including Switzerland), and a 'two-men-team' in Singen, focusing on the EEC countries, including Germany. The predefined application areas which had been confirmed by the market surveys of the previous year, signified the target markets within these first two years of commencing production. These were the segments for commercial vehicle construction, furniture, special briefcases, shop fitting, signboards and display elements, and the housing of apparatus, machines and devices. For some of these applications, samples had already been provided in 1968 with material produced on the panel press in Neuhausen. The 'bed mattress support panels' mentioned in my preface probably also had this origin but apparently did not prove to be a 'hit'. In the data recorded at that time no reference of any kind is made to this application and, therefore, it was probably not followed up.

It proved to be an enormous advantage for marketing ALUCOBOND® that the coil coating line put into operation in Singen a few years earlier, was capable straight from the beginning to provide the approved, high-class skin material for producing the panels, with

eration with two Swiss designers, namely Edy Brunner and Edgar Reinhard who created a series of spectacular exhibition stands – which attracted attention internationally and made them gain a high degree of recognition.

The strength of Ramser AG is actually based on the fact that with our know-how we are able and prepared to advise and support architects and designers in their projects, which, measured in square meters, appear rather modest. As flexible specialists our motto is, 'Small but fine!'. However, there has always been an opportunity for us to make use of our technical experience in handling ALUCOBOND®, also for larger projects, e.g. for the first stage of the new Swiss Technical University (Eidgenössische Technische Hochschule) building on the Hönggerberg in Zurich, as well as for the retrofitting of the old Siemens building in Zurich-Albisrieden with a rear-ventilated ALUCOBOND® cladding, and for the development work of an ALUCOBOND® façade on a modern office building in Singapore.

Our company has always been open for something new, and prepared to share the risk with our partners when implementing innovations. This undoubtedly has been an important factor for reaching our goals through all these years. And this also applies to a large extent to the cooperation with our business friends of ALUCOBOND®.

Shop-fittings

its lacquer technology adapted to different applications. Laquer coated coils as such were also sold directly at that time under the brand name ALUCOLUX® to the caravan industry, for instance, and for roll-forming for roofing applications. For the markets demanding a particularly scratch-resistant surface finish, above all for constructing apparatus and devices or switchgear cabinet casings, the so-called SINAPLAST finish was introduced, for which smooth or embossed, coloured PVC films were laminated onto the mill-finish ALUCOBOND® surfaces, on one or both sides. As this finish required a separate work process as a single-piece lamination and therefore was very cost-intensive, it never became a real 'hit' later on either, but nevertheless established itself during the first few years as a niche product that was also available in smallest quantities, until it was decided to completely remove this surface finish from the programme in the nineties.

The specialists in Neuhausen and Singen had already been working on the anodized surface finishes for ALUCOBOND® at a very early stage. The final step in the process in particular, the sealing of the anodized surface, proved to be problematic at the beginning due to








1969 – 1970 | Initial applications – Apparatus and Switch Cabinets, Furniture,

the high sealing temperature required. Together with selected anodizing plants in close vicinity, measures could be taken that finally produced perfect surface results on sufficiently flat panels. During the next few years, anodized ALUCOBOND® proved itself as an interesting product variation especially in architecture, although lacquered surfaces had clearly been in the lead from the very beginning when comparing the volume.

During the first few years, the distribution of ALUCOBOND® was handled as direct panel sales, on the one hand, and by way of joint application developments with some customers in their respective market segments, on the other. Particularly in Germany, metal stockists who, as buyers of Singen's aluminium semi-finished products, were already part of Singen's established clientele, could be won increasingly as independent sales channels, willing to stock the standard specifications in their warehouses in order to particularly serve the industry for building commercial vehicles and the signage market. For Singen this sales approach had the advantage of larger production batches, resulting in longer production campaigns which contributed towards increasingly gaining reliability and experience in the production flows.

Vehicle construction, Shop-fittings, Briefcases, Signs / Displays, Others

In the sample fabrication workshop in Neuhausen the foundations were laid for fabricating ALUCOBOND® and as a consequence, the first technical data sheets were printed which primarily emphasized and described the simple methods of fabrication of the panels and the possibilities of shaping them by bending, or using the routing and folding technique.

Following sales in 1969 which were not exactly encouraging due to the numerous quality problems that still existed, and following the completion of the first small façade project late that year (C&A Brenninkmeyer in Leverkusen, Germany – a very simple cladding using panels in their original unshaped state), the given records state that 48 605 m² of ALUCOBOND® were sold in 1970, 22 430 m² of which within EFTA and 26 175 m² to countries forming the EEC at that time. The major part during these two years still comprised applications that were non-architectural, with Switzerland and Germany as the main markets. But more important than these bare figures were the reports on the large number of projects, particularly in the architectural field, for which ALUCOBOND® had been specified, and which were waiting to be realized during the following years.





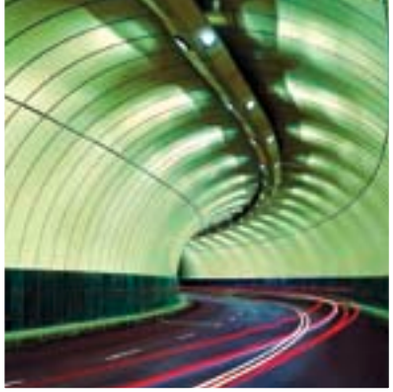

1971 – 1972

Roof-edgings, Balcony balustrade infills,

During this period, the projects applied for in 1970 led to the first notable transactions in the architectural sector, whereby roof-edgings and balcony balustrade infills topped the list and were supplied above all to the markets in Switzerland and Germany. The routing and folding technique proved to be an ideal fabrication method, particularly for the construction of roof-edgings, and for the fabricators involved it was a convincing solution, as they found that a greater part of the elements had to be routed only in their workshops and the folding did not have to be done until the elements were on the building site.

The brochure, 'ALUCOBOND® – the material for lining road tunnels', that was published in August 1969 already, led to various new tunnel-building and renovation projects, with the Teiftal Tunnel in Switzerland being the first to get an ALUCOBOND® lining in 1971. This reference project was followed by numerous other tunnel projects, mainly in Switzerland, but also in Germany and Italy.

The first successes could also be recorded in the construction of trade fair exhibition stands. For many well-known companies ALUCOBOND® became the material of preference for their exhibi-





Interior claddings, Tunnel linings, Exhibition stands, Others

tion stands, and also for interior wall claddings the product increasingly gained acceptance in the markets.

At that time, H.P. Christmann joined the sales team in Singen. Until today he holds the flag up high for this product, and together with W. Huonder from Allega, he is the member of the ALUCOBOND® staff who has served the product the longest. It was also decided to integrate the Alusuisse sales companies more closely in the ALUCOBOND® marketing process in Western Europe and Scandinavia.

The first participation in the 'BAU' exhibition in Munich in January 1972, Europe's most important trade show for the construction industry, proved to be the ideal platform for presenting the product to the international expert world and for arousing interest in ALUCOBOND® – also beyond the previous borders. A great many of the contacts established there were to 'pay off' in the future and since this time, the participation in this exhibition has been a permanent entry in ALUCOBOND®'s calendar.

Joachim Friedrich

ALUCOBOND® – ‘like a lottery-prize’

by Joachim Friedrich, co-owner of Aluform Alucobondverarbeitungs-GmbH, Bad Rappenau, Germany

My connection with ALUCOBOND® already began more than 37 years ago. An architect friend of mine discovered the product at the exhibition stand of Aluminium Walzwerke Singen GmbH at the ‘BAU’ in Munich in January 1972, and, upon his return, he told me about the exceptional properties of this innovative composite panel. I was very impressed with what I heard. We spontaneously decided to visit the manufacturer in Singen and returned in high spirits and full of enthusiasm after we had been informed at the plant in great detail about the diversity of application possibilities for ALUCOBOND®, and had been encouraged to begin fabricating the product. I could not have imagined then that meeting the sales

1973 – 1977

With the experience gained in the first roof-edging projects during the previous years it became evident that a faster sales growth in the architecture market not only necessitated the geographic expansion of the market coverage, but also the extension of the marketing activity to other architectural applications, such as façade and wall cladding. But above all, it became evident that this also required an intensive and constructive advisory service for technical applications to architects and fabricators. It so turned out that the supply of panels alone, in competition with more traditional materials, would only have increased turnover through price adjustments, despite all

Segalo Furniture, Romanel, Switzerland

Amicra apparatus housing

Rail car interior cladding

Change room wall cladding, Indoor Pool
Karlsruhe, Germany

team in Singen, which was still very small at the time, would turn out for me like a 'lottery-prize', so to speak.

At that time I was already working independently and operated a decoration and advertising company, which, amongst other fields, was also engaged in exhibition stand construction. I ordered some ALUCOBOND® panels and after my day's work – and sometimes together with my wife – I set up some fabrication experiments in the workshop of my company in Bad Wimpfen. The results convinced me to such an extent that I decided to set up a second company with ALUCOBOND®. I founded Aluform still in 1972.

The first sales successes already began to show after a few months, whereby at the beginning we concentrated on our activities in exhibition stand construction, display elements, shop-fitting and interior design, furniture and housings of apparatus. I remember our first larger-scale project very well, i.e. the complete interior cladding of the dressing and sanitary rooms of the indoor pool at the University of Karlsruhe, where ALUCOBOND® was used, one side laminated with yellow PVC foil – known at the time as SINAPLAST finish. This was the first project for which we also did the assembly and fixing of the panels.

the product's advantages. During this period the development of various ALUCOBOND® fixing systems, therefore, started under the direction of Manni Wolf in Zurich. We can recall the 'T40-system', for instance, and the introduction of the 'double top-hat' sections, that are still standing the test today for simple cladding projects and have been supplementing the ALUCOBOND® delivery programme from the extrusion production in Singen for a long time.

As a consequence, the first two technical application engineers for the Northern and Southern regions were already employed as the

Nuclear Research Centre,
Karlsruhe, Germany

Ski jump umpire tower,
Bischofshofen, Austria

Porsche CID,
Germany

During the following years our field of activity expanded, necessitating to move into a larger workshop in a former carpenter‘s shop nearby. In 1974 this also led to giving up my decoration business which I had operated parallel to my ALUCOBOND® activities.

I had meanwhile devoted myself entirely to ALUCOBOND®, to an extent that in 1977, with Singen‘s consent, I changed my company's name to Aluform Alucobondverarbeitungs-GmbH. Our business continued to develop very well, and since also the previous space had become too small, the move to new premises at today‘s address took place in 1991. Due to a strong expansion of our activities and the fast growth we experienced, even these were no longer sufficient, with the result that in 1999 a new warehouse was added.

After completing his studies as an engineer and production technician, my son Tim joined the company in 1995 as a co-owner and the managing director. Jointly we then expanded our activities into the field of architecture. Whereas in the initial years we acted as a subcontractor only, just doing the fabrication and supplying ready-to-install ALUCOBOND® for and to customers in façade construction, we subsequently also applied for all-inclusive architectural projects. Today already about half of our orders include the installation of ALUCOBOND® panels as well.

Particularly worth mentioning in this context is our present involvement in the Porsche Reimaging Programme. To-date we have already clad more than 30 Porsche dealership buildings with ALUCOBOND® and completed a variety of other façade projects.

For almost 37 years now, we have been designing and working with ALUCOBOND®. Due to our extensive experience and the know-how we have acquired throughout the years in fabricating compos-

1973 – 1977

field sales force in Germany in 1973, and were to be followed three years later by an additional staff member. Their sales activity, above all directed to architects and supported during the initial phase by Manni Wolf, soon began to bear fruit, though on a smaller scale. In Switzerland Manni Wolf had this function and he also did intensive product coaching of the Alusuisse sales companies.

The sales successes in the segment of external wall and façade cladding materialized rapidly; however, the majority of projects continued to be realized in Switzerland and Germany. The geographical expansion in Europe only progressed relatively slowly and it was not until 1975 – 1977 that the breakthrough appeared to be reached, also in other West European countries and Scandinavia, although the number of façade projects done was still comparatively low.

I, myself, moved to South Africa at the end of 1972 after a 2-year ‘stopover’ in Kenya, in order to set up and manage an Alusuisse sales company. A situation turned into reality there, that I could never have imagined during my first encounter with ALUCOBOND®

ite materials, we have always managed to find innovative ways to meet individual demands of our customers. In doing so, we make use of state-of-the-art machinery, portal routing machines, automatic punching presses, bending machines, machining centres and other special machinery. This machine park has enabled us - in the meantime also with ALUCORE® – to become a competent sub-supplier to well-known industrial companies in the fields of road and rail transport vehicle construction.

Throughout the years we have often provided fabrication demonstrations to customers of Alcan Singen, in particular from overseas, and have been able to establish a network with numerous like-minded contacts around the world.

With our enthusiasm for design and the composite products of Alcan Singen we endeavour to devote our entire ability to mastering the most sophisticated challenges of our customers in architecture, exhibition stand construction and industrial applications as regards technology and creative design. During our many years of practical experience we have gained the necessary knowledge. Always in search of even better solutions, we tread new ways without any reservations. Through continuous innovation and investments in modern machinery we want to be a leader in processing composite materials also in future. Our aims for the future are to cover a wide range of activities, to remain a reliable partner for our customers and continue to supply quality products.

Our achievements to date are also due to a large extent to the many years of support we enjoyed from Alcan Singen and its competent team. We are confident that this promising mutual collaboration will also continue in the future and contribute towards reaching our goals.

in 1969. As luck would have it, I became acquainted with the owner of a local company at a sporting event in 1974. This company produced electronic control desks and high-quality electronic switch cabinets and devices on a large scale. This acquaintance developed into a business connection that lasted for many years and led to annual deliveries of 6000 to 8000 m² of ALUCOBOND® panels with SINAPLAST finish on one side. Up until the end of the 1970s, these were to remain the only deliveries abroad outside Europe, apart from the exports to USA as from 1977 in preparation of the market for the local production commencing at the end of 1979.

Factory building Dial-Norm,
Kirchberg, Switzerland

Rheinmöwe Furniture,
Worms, Germany

School Centre,
Mellingen, Switzerland

David Muirie

A Pioneer in the UK

by David Muirie, formerly co-owner of Booth-Muirie Ltd., Glasgow, Scotland

It was as early as 1973 that I first learned of 'a product that continuously bonded aluminium sheets and a plastic core together to make a very flat panel'.

This came from a chance meeting with Sir Norman Reid, Director of the Tate Gallery in London who was at that time extending the gallery. One of his architects had learned of such a product being produced in Germany, called ALUCOBOND®. While the new product was not ultimately used on that project, contact was made with Aluminium Walzwerke Singen GmbH which led to Booth-Muirie Ltd pioneering ALUCOBOND® in the UK.

At that time, while the product remained very reliable, little was known about how best to process and fabricate it into claddings for buildings, and much time and efforts were spent in finding the best methods and uses.

In these early days panels were drawn, marked up, routed, cut by hand and formed up on large optically flat tables by tradesmen such as carpenters, pattern makers and sheet metal workers. Booth-Muirie Ltd established a training course with Anniesland Technical College, Glasgow which was a mixture of each of these trades, and which led to a qualification known as 'ALUCOBOND® Technician'. We continued to benefit from these technicians who have moved through the Company into senior positions both in manufacturing and the drawing office.

One very early example was a large bingo hall and amusement arcade – Coral Island – in the English holiday town of Blackpool, which was clad using ALUCOBOND® coloured Chrome Yellow and Blood Orange. Certainly a building that was hard to miss! Remarkable was that on it's exposed seafront site, the colours remained vibrant until the building was remodelled some 25 years later! The panels were fixed using edge screws onto metal support rails, and the joint and fixings were in turn covered with a specially extruded PVC top hat cover strip.

In 1981 Booth-Muirie Ltd. supplied anodic brown double curved fascias to a new factory for a semi-conductor company in Caldicot, Gwent. The building is single storey, but with large plenum areas and a fascia 3 metres deep and twice curved which extends around the building to a length of almost half a mile! The large mitred corner units were fully pre-fabricated in our Glasgow fabrication workshop and shipped to site as single units.

Coral Island Bingo Hall, Blackpool, England

Booth-Muirie have since used tens of thousand square meters of ALUCOBOND® on a very large number of prestigious buildings such as the Wimbledon Centre Court, Channel Tunnel Rail Link, B Sky B, Dublin Airport, just to mention a few.

I am not aware of any product failures over the past more than 35 years, which contributes to the fact that we have enjoyed working with ALUCOBOND® over such a long period of time and I am certain this will continue for many years to come.

Office Building F1, Edinburgh, Scotland

1978 – 1979

After a comparably small-scale CID (Corporate Identity) programme had already been started in some European countries in 1975/1976 for the modernization of ESSO petrol stations, and ALUCOBOND® supplied for their buildings, intensive negotiations and extensive final selection processes from various samples could be rounded off successfully in 1978 with a long-term supply contract for the V.A.G (Volkswagen AG) CID programme which was implemented on all continents. Approx. 200 000 m² of light-blue lacquered ALUCOBOND® were supplied over several years to a German contractor handling the global programme. At that time Mercedes and BMW also chose the product with anodic silver respectively white stove-lacquered surfaces for redesigning their car dealership showrooms and office buildings adjoining them. Particularly the Mercedes roof-edgings using ALUCOBOND® can still be found today throughout the world and enhance the prestigious image of this car brand in an excellent way.

Due to its excellent resistance to weather and its colour fastness, leading European manufacturers of sports equipment also decided to use ALUCOBOND® panels during these years for producing

Initial CID-Projects

TT-table, France

Telephone booths, Austria

table-tennis tables for hobby purposes that were suitable for outdoor use and storage. The company Donnay in France, known mainly for its tennis rackets, was the main purchaser, but other well-known companies in Spain, Germany and Scandinavia were also supplied for many years. All in all, well over 500 000 m² of ALUCOBOND® were produced for this application.

As from early 1979 natural colour anodized ALUCOBOND® was used for manufacturing public telephone booths in Austria within

International Village,
Vancouver, Canada

International Arctic Research Center,
Fairbanks, USA

Janssen Pharma,
Neuss, Germany

ALUCOBOND® SB1/21 Projects | 1978 – 1979

the scope of an extensive renovation programme which lasted several years and also developed into significant production series.

The changes in fire regulations, above all in Germany, increasingly demanded the implementation of flame retardant products for specific architectural applications. The ALUCOBOND® development team was excellently prepared for this. The first tests with PVC as a core material for improving the fire behaviour properties already began in April 1969. The know-how available at that time served as the basis for the subsequent research and development work that finally led to launching ALUCOBOND® SB1 (flame retardent as defined by DIN 4102) on the market in Europe at the end of the year. In USA, this type was produced and sold later as ALUCOBOND® 21.

James Burr

Recollections of Launching ALUCOBOND® in USA

by James Burr, formerly President, Alcan Composites USA

I joined Aluminium Walzwerke Singen as a foil department process engineer in early 1968. At that time the Singen plant was enjoying rapid expansion and investment. Aluminum sheet and aluminum foil were well established activities at the plant with major assets and fast growing sales. There was a great depth of expertise also in the conversion of foil such as lacquering, printing and laminating. It was at this time that plans were developed for a new activity in materials that fell in the areas between sheet and foil but also included processing such as laminating and painting. This was the product range called 'Thin Strip'.

A new department was created for these activities and the decision made to make the ALUCOBOND® production part of them. A commitment was also made to have the first successful production run before the end of 1968.

On 16th December, 1968 the new continuous ALUCOBOND® production line went operational. With the year-end deadline for the production of the first panels approaching fast and with only a few days to go before the start of the year-end holidays a panel was finally produced that would allow success to be claimed. However, it was still far from a commercial product. It was at this point that I became involved in ALUCOBOND®. As a process engineer I assisted in resolving the many unsolved production challenges. Key issues were still reliable adhesion between the core and the aluminium and in producing flat panels of material. In coordination with

1979

This year saw the first ALUCOBOND® deliveries to Australia, mainly with anodized surface finish. The contact with the buyer came about more by chance. When visiting a trade show in Germany, he was informed about this product which fitted excellently as infill panels in the modular profile insertion system he was selling in Australia for the construction of trade fair exhibition stands and display elements. This customer relationship with 'down under' ushered in ALUCOBOND®'s globalisation, as it were, which was to progress rapidly in the following years.

The next step already followed at the end of 1979 when the production in Benton, Kentucky, USA began. The introduction of the product to North America had been done in the previous years with deliveries from Singen; therefore, when the local production started, several architectural projects had already been realized and now served as references for the local product. Mid 1979 I, myself, had returned to Singen from South Africa in order to take over the responsibility for the marketing and sales of ALUCOBOND® after the sudden death of Franz Luckey. My connection with the product, which continued for almost 30 years, had then begun.

Alcan Alucobond offices,
Benton/KY, USA

the technical centre in Neuhausen the processes were adapted and several significant changes made to the equipment as these problems were addressed and successively solved.

In 1972 I was appointed Production Manager for the ALUCOBOND® production line along with responsibility for the two coating lines. The volumes started to grow as more and more orders for various applications, including smaller architectural projects, were secured and a distribution system developed in several European countries. Also focus started on the North American market but with no quick successes.

In 1975 I was approached and asked if I would be interested in a transfer to United States to start a market study for several products. These included a packaging material and some construction products. One of these was ALUCOBOND®. It seemed rather strange that I would be chosen for this since my formal education was in engineering and my experience was all in manufacturing, but I could speak English! I had long wanted to travel to United States and since I was young and willing to accept a new challenge I accepted and in late June of that year I arrived in New York to start my assignment. Working out of the Alusuisse trading office in New Jersey I started my first market development assignment with no formal training or experience in this field, in probably the most sophisticated market in the world. I already had some activities in architecture and this gave me some contacts with distributors and designers. People fell in love with this new ALUCOBOND® material and it was not long before some projects were specified. Initial supplies came from Germany, however, as volume requirement grew timely supply increasingly became a challenge. In the architectural project business generally final details of sizes and quantities are not available until shortly before they are required but with delivery times from the factory in Germany and ocean freight, the project management to ensure timely release of orders was critical. We established a small inventory in a warehouse first in New Jersey and later also in Los Angeles.

With market interest and requests from architects and designers for support in designing the ALUCOBOND® product in their projects, it quickly became clear that a network of capable designers, fabrica-

tors and installers would be needed to support the product in the field. Alusuisse had fairly extensive operations in the US at that time operating under the company name of Conalco. These included the full range of operations from alumina refineries, smelters, rolling mills, foil plants and also some architectural operations supplying materials for curtain walls, commercial windows and store fronts. With support from the sales team for the architectural products, leading fabricators, particularly those with an interest in innovative materials and systems were identified and interviewed. Discussions with these industry experts identified several very clear opportunities for ALUCOBOND® materials. In particular, use as spandrel panels in commercial buildings was identified early on. Products then in use were unable to offer the flatness, clean aesthetic look and high quality coatings that we were offering with ALUCOBOND®. The ease of fabrication was not fully appreciated until fabricators had experience with the material but this quickly also became recognized as a very important value.

About a year after I arrived in USA it was decided to start development of a project for ALUCOBOND® production in USA. I relocated to St Louis, Missouri, the headquarters of Conalco. A project was prepared, approved and work started on the design, ordering and

U.S. Xpress, Chattanooga/TN, USA

Plaza Midtown, Atlanta/GA, USA

installation of the equipment at the Benton, Kentucky facility. The design and specifications for the production line were developed jointly with the local US team and key experts from the Singen engineering team. It was decided to purchase all the major equipment parts from USA suppliers with a few key technical items supplied from Germany. It was not always easy to reconcile the differences between the US and German approaches to machine design but I believe that this produced a great result. Progress went well and in late 1979 the first panels came off the production line in Benton. Eight years later a paint line was added to ensure reliable supply of high quality painted aluminum sheet.

In parallel with the set up of the production facility much work had to be done to obtain approval for the use of ALUCOBOND® from the various building code authorities. At that time there were three major code bodies and many local and city codes. Each had different regulations and none had clear requirements that would apply to this new composite material. Working closely with the code authorities and experts in this field new regulations and performance requirements were developed which included new test procedures and standards. This was a major achievement and greatly facilitated the specification and use of ALUCOBOND® in various architectural applications.

Since that time, ALUCOBOND® sales have continued to grow, the production process has been improved and capacity expanded and new systems for use of the product have been introduced. New markets have been established and new products such as DIBOND® developed which have been very successful.

It is fascinating to look back to 1968 and that early phase in the history of ALUCOBOND® and then see the way the product has had an impact on design and use of materials, not just in Germany but on all continents. The vision of Dr. Altenpohl, the skills of the scientists and engineers, the perseverance of the operations teams and the dedication and determination of the sales teams have each contributed to the development of a whole new industry.

Jim Helgoth

A Toast to 40 … and Many More

by Jim Helgoth, President, Elward Systems Corporation, Denver, USA

In 1977, serendipity introduced our founder, Mel Elward, to our future. He was attending a trade show in Phoenix and just happened to come upon the ALUCOBOND® booth. Mel was rightly impressed by the product for its composition and full range of applications. For the next 30 years we have evolved as a company that continues to succeed within a niche market for exterior walls focusing on the ALUCOBOND® product.

We started out with small jobs that used some of the original standard colors like bright orange and red. In 1978 we completed the Dairyland Insurance (today Moore) Office Building in Denver, our first larger, clear anodized ALUCOBOND® project, using panels shipped out of Singen / Germany, at a time the US production facility in Benton, Kentucky was still under construction.

The use of ALUCOBOND® pushed us into fabrication, which we had never done. We quickly realized we could only guarantee a timely completion of the projects, while improving quality control, by pushing our own extrusion design. Not satisfied with the inherent problems of a 'caulked' system, we developed our own 'dry' design concept. As Doug Elward explains, "Our current Rout & Return Dry Set System is not substantially different from the panel

Biltmore office complex, Phoenix/AZ, USA

system Ev Mitchell (our former Vice President) designed more than 30 years ago". As a matter of fact, it has been used on over 15 million square feet of ALUCOBOND® installations – without any failures.

Since 1981, Elward has focused on continuing to improve engineering and fabrication procedures, along with performance testing of the individual systems. In addition, the Elward and ALUCOBOND® staff worked together to address how this new and unique type of wall material could fit into the rigid national and regional building codes. This is still an ongoing process.

By the end of 1983, approx. 20 % of our business was ALUCOBOND® jobs. As time went by, Mel Elward became more convinced that the product was something he needed to promote to the Distributors Council, a professional gathering of construction distributors from around the country. Taking Mel's lead, a group of members became

ESC offices,
Lakewood/CO, USA

Dairyland Insurance (Moore) offices,
Denver/CO, USA

fabricators and installers. The original Distributor Council fabricators reads like a list of 'Who's Who' in ALUCOBOND® in USA.

Through the years, we have experienced great accomplishments. I emphatically state, "Our relationship with Alcan Composites actually fostered the evolution and success of our company by giving us the courage and insight to change our business model". In 1991, Elward decided to offer its engineering and fabrication services to others, as well as supply the needs of Elward Construction. As strictly a panel fabricator, Elward Systems Corporation was formed. Finally, Elward's mother ship (the Denver office) took the giant leap in 2004 of closing its Colorado subcontracting operations and focusing all its efforts on the expansion and success of Elward Systems Corporation.

Today, ALUCOBOND® represents approx. 60 % of Elward's business shared by our Denver and Phoenix offices, which is led by Brad Elward. Advancing from primarily a construction entity to an engineering fabrication company has been a significant achievement for Elward. We owe a great deal of our success to the 'partnership' relationship we enjoy with Alcan Composites. We share ALUCOBOND®'s desire to expand the market for aluminum composite panels and strongly believe that what is good for ALUCOBOND® is good for Elward Systems Corporation.

We look forward to providing fabricated ALUCOBOND® panels for the commercial construction market including office buildings, hospitals, universities, etc. And, like Alcan, Elward sees sustainability as an enormous opportunity to reinforce our competitive edge while 'Perfecting Performance' of our ALUCOBOND® fabrications. It's our hope that Alcan Composites can create new or advanced technologies – such as photovoltaic technology – that will reduce greenhouse emissions, minimize the carbon footprint of each of our projects, while fulfilling our social responsibility.

I would like to reflect that more than thirty years ago, we took a leap of faith and hitched our wagon to the ALUCOBOND® star. Looking back and looking forward – it's all good. Actually, if we were to use Mel's words it's all 'beautiful'!

Happy 40th Anniversary ALUCOBOND®!

1 Windsor Casino, Windsor, Ontario, Canada

2 Sun Healthcare, Albuquerque/NM, USA

3 FedEx Forum, Memphis/TN, USA

4 W.J. Clinton Presidential Center, Little Rock/AR, USA

5 Helen of Troy, El Paso /TX, USA

6 Benicia-Martinez Toll Plaza, Martinez/CA, USA

7 Brossman Center, Philadelphia, USA

8 Las Vegas/NV Airport, USA

9 Sharp Grossmont Hospital, La Mesa/CA, USA

10 Delaware River Port Authority, Camden/NJ, USA

Bill Kerr

The Australian Experience

by Bill Kerr, National Sales and Technical Manager, Alucobond Architectural Pty. Ltd., Melbourne, Australia

Whilst my experience with ALUCOBOND® started in 1985, the story of ALUCOBOND® in Australia began a number of years earlier, in the late 70's. Don and Valda Klaric, the original owners, attended an exhibition in Germany looking for a panel that would fit the system groove in an exhibition and display system they were distributing in Australia. ALUCOBOND®, they found, was a perfect fit, the 4 mm thickness was ideal for the 4,5 mm system groove and offered a range of prefinished colours previously unattainable in Australia. Don and Valda consequently decided to import the product exclusively for use in combination with their profile system.

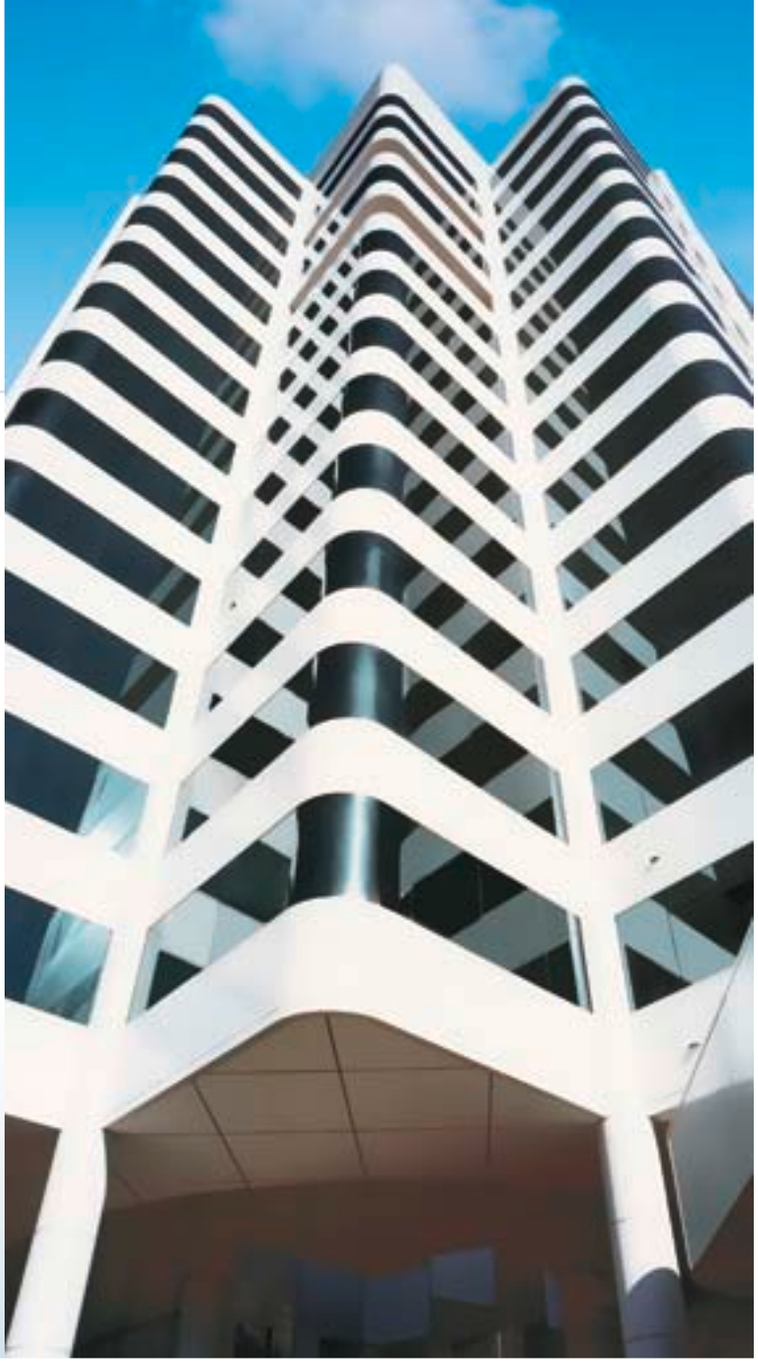
In 1980 Claus Leyting visited Australia and encouraged Don and Valda to extend their activity into the architectural market. After some discussions, a deal was done for Don's and Valda's company, Space Display Systems, to be the exclusive distributor of ALUCOBOND® for Australia and New Zealand, and sealed with nothing more than a gentlemen's handshake.

Space Display Systems began distributing ALUCOBOND® and Don set about introducing architects to the product, initially with moderate success. ALUCOBOND® was a very novel product for Australia, at a time when 4,5 mm thick powder coated aluminium sheet was considered to be the norm for architectural façades and cladding. Don was an entrepreneur without peer, indeed the consummate salesman, (he could sell ice to the Eskimos), but had little technical or façade design expertise, and relied heavily on expert advice from Germany through the late Mr. Manni Wolf. Sales continued to grow, albeit slowly and limited to mainly Melbourne projects. Finally in 1984 the first major project to be won was the Aetna Twin Towers Centre in Sydney, using over 12 000 m² of 6mm thick ALUCOBOND®.

In 1985 Don realized that he needed to have somebody with technical and design expertise in façade cladding to promote ALUCOBOND® and assist architects in their façade designs and I was asked to join

1980

In 1979 I took over a marketing and sales department with very little practical experience in exports and little knowledge of foreign languages. For the previous concentration of sales efforts on Central and Western Europe, and for processing the inquiries and handling the orders with and via the Alusuisse sales companies, this seemed sufficient. However, I was determined to expand the export business as intensively as possible to all the 'white spots' on the world map and not to rely too heavily on third parties, not even in Europe. We wanted to boost the sales on all fronts and also have a direct influence on the success and failure of our sales and marketing efforts.



Aetna Twin Towers,
Sydney, Australia

the company. My first 6 months not only were spent visiting architects and designers with the black briefcase full of ALUCOBOND® samples, showing them how the product could be used, but also at the same time educating myself about ALUCOBOND®. A year later Alucobond Architectural Pty. Ltd. was formed as a separate company, and thus began a very exciting and fulfilling period in my life and that of Alucobond Architectural.

The Aetna Centre was the beginning of a period when ALUCOBOND® was perceived within the architectural industry to be a 'high end' building product, when it would be specified for prestigious buildings and façades, but considered too expensive for ordinary cladding. The over cladding of the St Martin's Tower in Perth for which over 20 000 m² of ALUCOBOND® were specified, was considered at the time to be the pinnacle of our success. Once again Manni Wolf put his genius on display by designing the cladding system to be used, on a table napkin over lunch. Don Klaric

Thus the first thing we needed to do was create the prerequisites in terms of personnel for a stronger sales growth and the envisaged geographic expansion. The formation of an experienced export group was initiated, and it was agreed with the Alusuisse sales companies to appoint existing staff members with a technical background as product managers for marketing ALUCOBOND®, or take on new personnel. My own sales-oriented activity during the next few years was mainly concentrated on the non-European markets.

Royal Melbourne Institute of Technology, Melbourne, Australia

unfortunately passed away suddenly in 1988 and sadly was never to see this project, his 'jewel in the crown', come to fruition.

Valda Klaric continued to run the company, and the period from 1988 through to 1998 saw sales of ALUCOBOND® continue to grow. Major projects during this period included 505 Collins Street, 8 Nicholson Street, RMIT Bundoora, all in Melbourne and the Sun Alliance Tower in Sydney. It was during this period that it became clear that ALUCOBOND® could not rely just on prestigious buildings alone to increase sales. It needed to be seen as a mainstream building product and promoted and priced accordingly.

Buildings where ALUCOBOND® in the past was perceived to be too expensive and thin gauge powder coated aluminium or steel, or painted compressed sheet, were considered to be the obvious choice, could for a small price penalty, be upgraded to ALUCOBOND®. Developers were the first to see the long term advantages of a low maintenance cladding material, and designers and architects loved the choice of colours available from the large amount of stock held in our warehouse. By 1998 sales of ALUCOBOND® were nudging 100 000 m² and we were wondering just how far we could go.

In 1998 Valda sold AlucobondArchitectural to the largest customer of the exhibition system that Space Display Systems made. AE Displays, the new owners, were able to inject further capital into the business which allowed the opening of Sydney and Brisbane based warehouses, the employment of a larger sales team and larger stock holdings. We were truly now becoming a national company. The new Managing Director, Harry Johnson, late in 2001 employed Bruce Rayment as General Manager (later to become CEO) and his introduction of corporate strategies and business acumen saw sales in the early 2000's increase to 150 000 m² per annum and climbing. The year 2002 saw the completion of the West Australian Maritime Museum. For me personally, this was one of the most fulfilling

1980

The technical application advisory service had already been identified at an earlier stage as an absolutely necessary component for growth-oriented, successful ALUCOBOND® sales. Thus, in 1980 an 'Application Technology' group was also formed in Singen for supporting the sales at home and abroad and with the task of setting up an extensive technical documentation of all aspects of the ALUCOBOND® applications, and updating it regularly, in line with the changing and growing demands of the markets.

St. Martins Tower, Perth, Australia

ALUCOBOND® projects I have ever been involved in, having been heavily involved in the design of the complex roof cladding system from 1999 with the architects, until its final completion. This project really pushed the boundaries and limits of ALUCOBOND® and still remains today as one of my favourite projects. Sales of ALUCOBOND® had continued to grow and 2007 saw sales peak at a remarkable 350 000 m².

In 2007 ownership of Alucobond Architectural changed hands once again, this time to the Halifax Vogel Group (HVG), up to that stage our largest competitor. Prior to taking over, HVG were the Australian distributor of a competitive aluminium composite panel, but changing distribution strategies by its manufacturer saw them looking for a replacement panel in their range of products. As it happened, the owners were receptive to a reputable buyer, and HVG's financial ability to sustain growth and their distribution network throughout Australia was considered a perfect fit.

2008 saw ALUCOBOND® sales exceed 500 000 m², something that Don & Valda Klaric in their wildest dreams could never have foreseen all those years ago, but then, maybe they did.

As for the future, I believe that Alcan Composites' continuing R & D for innovative finishes and products will ensure that architects and designers will continue to specify ALUCOBOND® for many years to come, and I for one, feel honoured and very proud to have been a part of the Australian experience that started for me back in 1985 and will continue for many more years. Having said that,

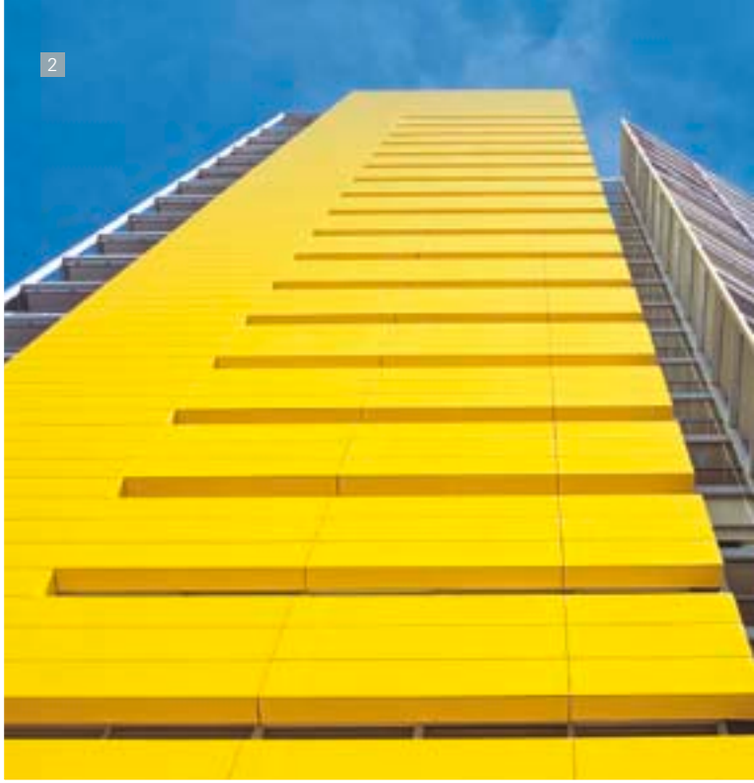
In Australia, the business relationship established the year before was intensified by drawing up an exclusive agreement for the distribution of ALUCOBOND® both there and in New Zealand, and for extending the marketing activity to the architectural field.

Maritime Museum,
Freemantle, Australia

I also feel it is time to acknowledge some of those people from Alcan Composites who, over the journey, have been instrumental in the development of ALUCOBOND® in Australia and who both Alucobond Architectural Pty. Ltd. and I are indebted.

Claus Leyting for his continuous support and belief in Alucobond Architectural Pty. Ltd. from day one until his retirement early 2008, the late Manni Wolf for his design expertise in the early days, Susanne Haas, whose role in our continued success over the past 15 years should never be under estimated, Frank Ritter for his technical advice over the years, and, of course, Erich Schneider and his Singapore team.

Maritime Museum,
Freemantle, Australia



1 Brindabella Business Park, Canberra, Australia

2 Distillery Jacksons Landing, Sydney, Australia

3 Crown Promenade Hotel, Melbourne, Australia

4 Auburn Power Shopping Centre, Sydney, Australian

5 Quantas 1st Class Lounge, Sydney Airport, Australia

6 Jalcon Homes offices, Auckland, New Zealand

Projects in Australia und New Zealand

ITAF-participants

1981

The reinforcement of the sales team in Singen had progressed well, and the effect the Application Technology group had on the business became increasingly noticeable. By autumn that year the ALUCOBOND® product managers in the Alusuisse sales companies were also firmly established. This was good reason for organizing the first 'ITAF' (International Technical ALUCOBOND® Forum) in Neuhausen, which was attended by almost the entire 'sales team Europe', to discuss strategy issues and to set innovation targets for the nearer future together with the colleagues in research and development. Also the first participation in the 'Dach & Wand' ('Roof & Wall') trade fair in Cologne, saw practically the entire European ALUCOBOND® sales team present at the Singen exhibition booth.

Exhibition stand 'Dach & Wand'

1 Residential buildings, Magdeburg

2 Shopping Centre, Berlin

3 Office building AREVA, Erlangen

Projects in Germany

The team of the Singen application engineers in the German field sales force, had meanwhile reached the planned number of 5 staff members, and soon we were acting independently on our home market, i.e. without the support of the Singen sales offices for semi-finished products in the individual German federal states, which until then, had mainly been offering customer service to the numerous, regional metal stockists. The network of ALUCOBOND®-oriented façade construction and cladding companies and fabricators was expanded increasingly during the following years. This resulted in continually increasing project realizations.

A similarly positive development could also be seen in the architectural business in Central and Western Europe, thanks to the meanwhile considerably expanded presence on the markets. ALUCOBOND® was now represented in each country, either by the product experts in the Alusuisse sales companies or, as in Ireland, Iceland, Greece and Turkey, by exclusive representations. Sales successes soon set in, and the turnover in Europe increased at a rapid rate in the following years, whereby basically all countries, with only a few exceptions, contributed to this development, though the extent of spectacular project realizations differed country by country.

1 Department Store Peek & Cloppenburg, Lübeck

2 Aqua Lung, Singen

3 Hugo Boss offices, Metzingen

4 ECE City Gallery, Heilbronn

5 IKEA store, Frankfurt

6 County Administration, Friedrichshafen

7 Residential buildings, Ratingen

5

7

6

1 Science Library,
Liberec, Chech Republic

2 Akmerkez Centre,
Istanbul, Turkey

3 Tatgazinvest,
Kasan, Russia

4 Children's wear Alouette,
Vrilissia, Greece

5 Asko-Antilla Shopping Centre,
Ravatulla, Finland

6 Central Exchange,
Glasgow, Scotland

7 RTV Pink,
Belgrade, Serbia

8

9

10

11

8 Lenehans Hardware,
Dublin, Ireland

9 Aluminium Centre,
Houten, Netherlands

10 3M Belgium,
Machelen, Belgium

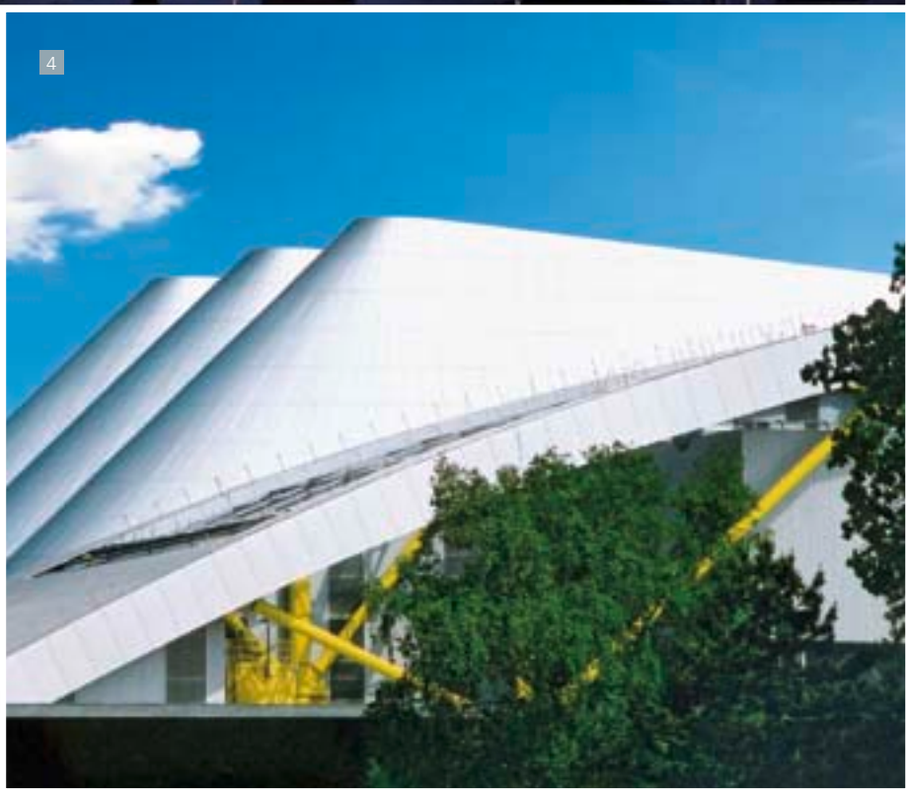
11 Cultural Centre,
Rørveg, Norway

1 Opera,
Copenhagen, Denmark

2 Cultural Centre,
Uppsala, Sweden

3 Mago offices and warehouse,
Nadarzyn, Poland

4 Energy Centre,
Halluin, France



Projects in Europe

5 EMPA Institute,
St. Gallen, Switzerland

6 Münzgraben Street,
Graz, Austria

7 Grange City Hotel,
London, England

8 European Parliament,
Strasbourg, France

9 Kaiser offices,
Schaanwald, Liechtenstein

1 Presidential Palace, Gabon

2 Air Mauritius H.Q., Port Louis, Mauritius

3 Telekom, Durban, South Africa

4 Rightford Searle Tripp Makin, Cape Town, South Africa

5 35 Wale Street, Cape Town, South Africa

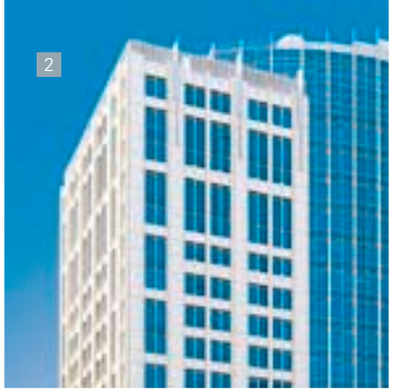
6 Espace Porte d'Anfa, Casablanca, Marocco

In 1982 I returned to South Africa again, for the first time. I wanted to assess ALUCOBOND®'s potential in the building industry and consult my earlier contacts for this purpose. Together with my successor who had also worked in Singen before, I happened to find out about a company group that held a leading position in the metal construction industry in Johannesburg, Durban and Cape Town, i.e. in the country's main cities. The technical fabrication requirements were therefore given, and South Africa experienced a boom in its building industry at the time. We consequently agreed on a non-exclusive cooperation. On this basis we were able to realize a number of ALUCOBOND® façade projects in South Africa during the following years.

Projects in Africa

A similar arrangement could also be reached with a small metal construction company on the island of Mauritius, which I visited on my return journey. This company mainly operated in the metal windows market and was successfully marketing the Teknal Systems from France. ALUCOBOND® was regarded as an ideal, complementary product and today, on the holiday island of Mauritius, we find several cladding projects and curtain walls realized with the product. The administration building of Air Mauritius in Port Louis probably is the best example.

In Germany, the first 'general approval of ALUCOBOND® as a façade-cladding material' was granted by the building authorities in 1982 and thus an important hurdle could be mastered successfully along the marketing track.



1 Centre Sofil,
Beirut, Lebanon

2 Hereb Al Otaiba Building,
Abu Dhabi

3 Majid Al Kazim Twin Towers,
Dubai

4 Exhibition Centre,
Dubai

5 Danube Centre,
Jeddah, Saudi Arabia

6 IKEA Store,
Jeddah, Saudi Arabia

1983

I had heard that Know-how Licensing Agreements in the field of aluminium extrusions had been concluded by Alusuisse at the beginning of the 80s with two companies in Bahrain and Saudi Arabia, and that Alusuisse had also delegated specialists to these companies. A Singen export salesman from the extrusion sector had gone to Bahrain to set up the sales of system profiles. In Saudi Arabia the Alusuisse delegate acted as the German general manager for the company with its factories in Jeddah and Dammam, both producing aluminium extrusions, above all for doors and windows. Both also operated anodizing plants.

7 Sharq City Tower, Kuwait

8 Gold Land Centre, Dubai

9 Al Aman House, Dubai

10 Police H.Q., Dubai

Projects in Middle East

At that time, the Middle East was still a white spot on the ALUCOBOND® world map. This was to change from 1983 onwards. I established contact with the two Alusuisse colleagues and travelled the Arabian peninsular, returning with ALUCOBOND® sales agreements for Saudi Arabia and Bahrain, which were soon to be followed by further agreements in the region, namely for Kuwait and the United Arab Emirates. Apart from concrete and natural stone, aluminium solid sheet was at that time the material of preference in these countries for cladding buildings, and our market partners had a difficult job to successfully promote

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Projects in Middle East

ALUCOBOND®. At the beginning the sales were restricted to small buildings, and I can well remember the first 'larger-scale' order of 1 500 m² of silver-metallic ALUCOBOND® for a project in Al Ain in the Emirates. However, we did not manage to achieve a real break-through with those partners at that time.

The following years we re-oriented ourselves in our search for the 'right' market partners, and this proved successful in all these countries. ALUCOBOND® sales in the Middle East subsequently rose continuously, and particularly during the last 10 years sales figures have shown an enormous increase, supported last but not

1 Almas Sharq Shopping Centre, Iran

2 Galleria 2000, Kuwait

3 Al Maidan Hospital, Kuwait

4 Emirates Airlines H.Q., Dubai

5 Government building, Beer Sheva, Israel

6 Daniv Centre, Petah Tigva, Kiriat Arie, Israel

7 Al Owais Tower, Sharjah, UAE

least, by the almost indescribable boom in the construction industry, which had spread across the entire region – a region in which today we find a large number of ALUCOBOND® project realizations, of which many are extremely spectacular.

Erich Schneider

25 Years of Dedication to ALUCOBOND® in Asia

by Erich Schneider, formerly Managing Director, Alcan Alucobond (Far East) Pte Ltd., Singapore

I first got to know ALUCOBOND® in 1982, nine years after I landed in Singapore as a young Swiss production engineer and had started a new chapter in my life working for a Swiss metal fabrication company. The products we made included airport ground support and galley equipment as well as air cargo containers, kitchen sinks, metal ladders, lift doors and architectural products like aluminium windows, curtain walls and wall cladding.

This highly diversified company was appointed the non-exclusive agent for the product just a few months prior to my 1982 home leave in Switzerland during which I met a sailing colleague of my brother-in-law, Emanuel (Manni) Wolf, who was in charge of selling ALUCOBOND® in Switzerland. He was known as 'Mr. ALUCOBOND' and introduced me to the product on a sailing trip on the Lake of Zurich. The meeting with him triggered my interest to bring this unique product to Singapore.

The company I worked for nine years now had its own anodizing plant and spray coating facilities and, therefore, really did not show much interest in using a pre-finished product. So, the ALUCOBOND® promotion material was left inside the marketing manager's drawer, and, after having gone through several assignments in the management of this company, I felt it was time for a change. I somehow felt then that the meeting with Manni Wolf and my interest in ALUCOBOND® could well be my chance to make the desired change in my career.

After hearing of my plans to leave the company, the supplier of cold room insulation panels which we used to build our airport catering truck bodies, contacted me and offered me a position in his company. He had the business set-up and the connections, and most important, strong financial backing, but he needed a new product to diversify his existing cold room insulation business.

1984

The Far East had been labelled to me by the Group headquarters in Zurich in the previous years as a 'hands-off' region for marketing ALUCOBOND®. Deliveries there were prohibited, so I was told, when I regularly tried to find out why. It was simply not possible to get any explanations from the Group. Apparently no-one wanted to tell me the reason for this parrying reaction; it is still incomprehensible, even until today. At that time I suspected that some licensing negotiations were pending with prospective companies in the Far East, possibly with Japan.

German Centre, Singapore

Here I was, with good technical know-how in the fabrication and installation of architectural wall cladding and knowing from my past employment that there was potential business in Singapore for the upgrading of façades of existing and new buildings.

It was at that time that Claus Leyting, the man-in-charge at Alusingen, visited Singapore to look for a new ALUCOBOND® agent. He encouraged me to accept the new job with the understanding that my new employer would be given the exclusive rights to sell ALUCOBOND®. My new Chinese boss and Claus Leyting quickly reached an agreement covering both Singapore and Malaysia. Why for the two countries together? At that time, people and business in both countries were so closely related, that most companies operated across the border. The market in Singapore alone would have been too small to set up a professional team to promote ALUCOBOND®.

It did not take us too long to interest some local architects and building owners in the new possibilities ALUCOBOND® offered in decorating the exterior of buildings. However, it was an uphill start to get owners accepting the quality of local fabrication. There was no experienced cladding contractor (except my former employer), and our marketing plan did not include setting up a fabrication plant. Everyone agreed that ALUCOBOND® was an excellent product. But what about fabrication and installation? We realized soon, that in order to get ALUCOBOND® accepted in the market, we had to provide turnkey service and take on the entire cladding contract, i.e. to be responsible for the quality of the installed cladding, not just material supply. This consequently gave us the opportunity to train some small aluminium fabricators and turn them into our future customers as loyal ALUCOBOND® applicators.

Soon after completion of the first small job of retro-fitting a commercial 3-storey building in Singapore with a new cladding, we

ALUCOBOND® deliveries would not come about anyway until successful product advertising had been carried out and this needed time, so I told myself, when making a stopover in Singapore in 1982 on a return flight from Australia. The reason was not to just have a welcome break during that very long flight, but also to evaluate the market and search for a suitable distribution partner. I received a reference from the Swiss Embassy about a Swiss metal processing company where – as I discovered later – Erich Schneider was employed. I agreed on a non-exclusive ALUCOBOND® sales agreement with this company, which in view

Wisma Genting,
Kuala Lumpur, Malaysia

landed the first three major cladding projects for high-rise buildings in Malaysia. The Wisma Genting, Peremba Headquarters and the Menara Boustead, all located in Kuala Lumpur, became soon the flagships for ALUCOBOND® promotion in Asia. Again, it was the technical assistance of our ALUCOBOND® team, which made it possible for the applicators to make the best use of the features of an aluminium composite panel – easy fabrication and installation.

The quality of ALUCOBOND® was superb compared with locally produced aluminium panels or similar products. Its 'German quality' became an industry standard in this region, which was often compared with the 'Mercedes' – quality and elegance for those who can afford it!

The mid 1980-ies was a good time for the building industry and we managed to secure many ALUCOBOND® projects, from small single-storey shop houses to prestigious high-rise office and public buildings. However, a slump in the Singapore and Malaysia construction industries started to affect our business.

It was in early 1987, when, during a visit to Singapore, Claus Leyting informed me that he was looking for an area representative to serve the market for ALUCOBOND® more directly. Our team of marketing and technical people had gained experience and expertise and were accepted by architects and developers. Therefore, I was ready to make a move from the local distributor to join the principal, without having the fear to lose business in the newly established market. On 1 April 1987, we registered the 'Alusingen GmbH Germany – Far East Representative Office' which was located in the basement of my 3-storey semi-detached bungalow. To help with paperwork and handle administrative matters, we hired a part-time secretary.

Initially my tasks were to promote ALUCOBOND® and find distribution partners in the Asia and Pacific regions, to provide technical support in the application of ALUCOBOND® and collect market information.

I started to travel the region to connect to the network of market partners already directly established by Alusingen earlier. Now working for Alusingen, my first trip brought me to Pusan in South Korea, where I met up with Manni Wolf to inspect the prototype

1984

of the 'foggy' situation at Group level, contained the necessary flexibility for future decisions. As luck would have it, Nestle was in the process of constructing a new factory and laboratory building and was looking for suitable material for the ceiling. The choice was for grey-beige lacquered ALUCOBOND®. We agreed on supply and invoicing to Switzerland and thus I adhered to the 'prohibition' of a direct delivery to the Far East. This way we had already completed the first project in the region in 1983 with approx. 800 m². ALUCOBOND®'s globalisation had taken a further step.

Woodlands Civic Centre,
Singapore

unit of the curtain wall for the Hyatt Hotel (now the Novotel). In Korea, ALUCOBOND® was already well introduced and had become the choice exterior finish of architects and developers. A few experienced fabricators served the market.

With photographs in my briefcase of many completed Korean buildings as references, I started my marketing and sales activities in less developed countries like Indonesia, the Philippines and Thailand. It turned out to be relatively easy to find companies with capable sales people and to make contact with the decision makers in their countries. The first question of the architects always was "how do you fix your panels?" We realized soon how important technical support was in the development of our markets.

It was for this reason that we got Julian Pok on board, who formerly was the technical director of the company which fabricated and installed ALUCOBOND® on one of the first highrise projects in Kuala Lumpur. His experience with ALUCOBOND® and his ability to communicate in Chinese helped us tremendously to penetrate into the Hongkong and China markets and to provide in-depth design and technical assistance to our customers.

We soon needed a full-time secretary, which filled up the office space available at my residence.

Our ALUCOBOND® sales in Asia grew rapidly. However, one of the problems we faced was the relatively long leadtime for the panels. With 3 – 5 weeks transit time from the factory in Germany to our customers in Asia, we lost many projects to the upcoming competition. Smaller projects were affected in particular.

To improve the availability of ALUCOBOND®, we started to keep stock of standard colours and sizes in Singapore. While we were originally concerned about the extra cost, we soon realized that customers were prepared to pay a premium, provided our panels were available 'immediately'. As trading was not permitted under the status of a representative office, Alusingen decided to register a legal entity in Singapore. This was done under the name 'Alucobond (Far East) Pte Ltd' on 25th July 1995.

Meanwhile, our nucleus team of three had grown to six, which included a marketing and sales manager, a technical manager, an administration manager, two administrative assistants and myself as

I had never given up hope that the unsatisfactory situation would be clarified one day, and that a 'release' would in fact finally be granted for the marketing and sales of ALUCOBOND® in the Far East, and I therefore travelled to the region at regular intervals, with the idea to create a basis 'in the event that …', which actually happened in 1984. I had been to Korea and Taiwan and initiated the development there of a more intensive handling of the market in the future, and on the return journey I again made a stopover in Singapore where – following Manni Wolf's recommendation – I met Erich Schneider who was just about to change jobs. The

the managing director. After two years in a temporary office, waiting for the German Centre to be completed, in April 1995 we finally moved into this prestigious building in Jurong East, which is clad with ALUCOBOND®.

During the same period, our business in China grew rapidly. With a few selected distributors taking care of different areas, and our intensive marketing activities and technical training seminars held together with our partners, we succeeded to ride the construction boom of the fast expanding Chinese cities. I still remember standing in the bare rice fields of Pudong, looking at the artist impressions of numerous high-rise buildings to come. Who would have thought that a completely new city could be developed in such a short time? It was possible in China then and still is.

Our sales increased to the extent that product leadtimes ex-works Germany increased sharply, despite diverting many orders to Alusuisse's USA plant. Have you ever experienced customers 'threatening with orders'?

For me, this was the most exciting period in my ALUCOBOND® sales career. To travel through China with our distributors, participating in exhibitions, meeting architects and developers to explain why to use ALUCOBOND® was sometimes a real experience. Actually, they already knew the answer from our distributors, but they needed to be confirmed by the principal's representative. We used to call it 'flying our flag'. Visiting contractors to help them fabricate and install our 'German Quality Panels' better and faster was sometimes another adventure, as in many instances they operated from rural areas and with primitive equipment. The catalogues of reputable panel saw suppliers in Switzerland or Germany became an as important sales tool as our ALUCOBOND® literature.

Upon closing a deal, a Chinese lunch or dinner was traditionally the time to deepen trust and friendship between parties. On special occasions, snakes, scorpions, deep-fried black ants (apparently good to maintain healthy hair) and many more creepy crawlies, all delicacies only the privileged could afford, were served to impress us. Refusing to eat would have insulted the hosts. However, when visiting our factory to inspect the ALUCOBOND® panels they had ordered, I often took revenge by taking them to a Swiss restaurant serving cheese fondue (Asians generally don't like cheese).

By the way, for many of our Chinese customers, a panel inspection at our factory in Germany was considered part of the sales agreement. It was interesting to note that only few of the visiting 'inspec-

1984

prerequisites for successfully marketing ALUCOBOND® could not have been better. My telex – which for me was the last attempt at gaining a sales release for the Far East – was sent off to Zurich on a Friday, requesting a binding and final reply by Monday of the following week, i.e. the day of my booked return flight to Europe. It was a tremendous surprise to me when, on the same day, due to the time difference, I was given the 'green light' in the telex reply. The way had been cleared for the successful distribution of ALUCOBOND® in Asia, which should continue for 25 years to come. I have never found out the reason for this sudden 'change of mind' in Zurich.

Peremba Headquarters,
Kuala Lumpur, Malaysia

tors' spent time checking the quality. Taking a group photo in front of the guard house (with company signboard as background) was more important for them. It was to prove to their bosses having visited the plant. The rest of their stay was usually dedicated to sightseeing.

Unfortunately, with the Asia financial crisis in 1997, the rapid growth came to an end and sales decreased sharply. At the same time, the new ALUCOBOND® manufacturing plant in Pudong, Shanghai was almost ready to produce 'German quality' panels. It was decided to serve the domestic market through a local sales team. Consequently the Singapore ALUCOBOND® team was no longer involved in the China business.

However, the plant in Shanghai was soon able to serve our existing Asian and Pacific markets with many standard ALUCOBOND® specifications and with shorter leadtimes. This opened new sales opportunities for us. With Australia and New Zealand being affected most by the long transit time from Germany, these markets were the first customers to procure some ALUCOBOND® made in China. As from 2001, Shanghai became an important source of supply and enabled us to reduce panel inventory in Singapore.

New Tech Park,
Singapore

In 1998, India started to 'wake up' and discovered the potential of good-looking buildings. Through enquiries from architects and developers visiting building material exhibitions in Singapore, we were soon able to establish contacts with potential clients in this previously unexplored territory.

No person could have tackled this difficult market better than our marketing and sales manager Arjen Flierman. The first time I met this veteran in architectural aluminium sales was during a tender interview of a major cladding project in Jakarta, when he represented our competitor. We won the job, and in 1995, he joined our ALUCOBOND® team. He spent many weeks travelling through India to visit architects and developers to promote ALUCOBOND® and to find distributors and fabricators in all major cities. Also in India, technical assistance in the proper application of our composite panels was of utmost importance to our clients. With Julian Pok, our technical manager, and Stefan Gisin, a graduate Swiss craftsman trained in sheet metal work and CAD designing who joined our team in 1997, we had the right people to support the marketing and sales promotion efforts with seminars on proper design and fabrication of our panels.

Contrary to China, where the safety of buildings is highly regulated through building codes, Indian building authorities hardly took enforcement action to ensure the structural safety of buildings. We have seen aluminium composite panels in India having been fixed using nails. On the other hand, ALUCOBOND® has been used to cover-up shoddy concrete and steel work. I remember a renowned international architect saying, after he had returned from India where he surveyed potential business: "In India, buildings are like sausages, one ought not to know what is inside". To summarize, it was a market with great potential for our product and our technical service.

The actual breakthrough came with the liberation of the Indian petrol sales. Petrol distribution companies were scrambling to upgrade their stations to attract customers. With the examples of Caltex, Shell and many other international oil companies, they soon discovered the advantage of ALUCOBOND® for creating their own corporate identities. But only the ALUCOBOND® team knew how to plan and properly fabricate and install a petrol station cladding and was willing to provide training to the local fabricators at no extra cost. It was worth the initial investment of time (and money). More than 40 % of the petrol stations built or upgraded in India between 2002 and 2007 wear ALUCOBOND® and this despite stiff competition from all international aluminium composite panel manufacturers.

I have specially featured the rise of ALUCOBOND® in China and in India. Like in any other business, those countries' mere size

New Tech Park,
Singapore

and population provided the basis for growth that could never be achieved in a developed country. But what made ALUCOBOND® so successful in all other Asian countries? Land at Kuala Lumpur International Airport and you will be greeted by ALUCOBOND® on all interior walls of the main terminal building. Many prestigious buildings in the city are vivid examples of what ALUCOBOND® can do. You drive down Jalan Sudirman in Jakarta and you will see ALUCOBOND® on nearly every 5th building. Also in Bangkok, many good-looking buildings wear ALUCOBOND®. Still today, despite the fierce competition from local products sold at much lower prices, ALUCOBOND® sales have not decreased in Korea. No doubt, the most important factors for successful sales are the quality of the product, a competitive price and reliable supply. Over and above these tangible factors, the success of ALUCOBOND® sales in Asia was very much achieved through people; people who were motivated to work as a team to make the sometimes impossible possible. Our motto has always been: "We help to create miracles though they might take a little longer."

For quite some time, the ALUCOBOND® team in Singapore consisted of eight people. In 2006, in agreement with the Business Unit Alcan Composites, Claus Leyting, President of the global PMU (Product Market Unit) Architecture, decided to relocate to Singapore to further strengthen Alcan Composites' presence in Asia. In October 2006 Claus joined our Singapore office. In my 25 years of association with ALUCOBOND® and in the 20 years as my direct superior, I got to know him as the driver behind the product and its global production and sales network. Under his leadership, ALUCOBOND® became the synonym for aluminium composite panels all over the world. I want to thank him for all his support and guidance he has given to me and to my team in the Far East.

The export teams at both our plants in Germany and China were an important link in our supply chain. With their dedication and understanding of the special market conditions in Asia, they helped providing reliable deliveries and accurate documentation, something not always usual in big companies. Many thanks to all who helped to make this possible. However, there was a limit to what we could do ourselves in Asian countries. The real credit for the growth in every territory goes to our dedicated distributors. They are the members of the Asia / Pacific ALUCOBOND® Family. To be successful, it needs more than a good product from a renowned manufacturer; it is the understanding of each other – beyond Dollars and Cents – that makes the difference. It is mutual trust that bonds us together.

The ALUCOBOND® team in Singapore covers the area from Pakistan in the West to Korea in the East and from China in the North to Australia / New Zealand in the South. Every year, the ALUCOBOND® Family Members meet in another city for serious business reviews. Thereafter it is 'bonding time' – we work hard and we play hard.

Having retired from my position last year, I thank all distributors and my team members for their support and wish all of them good success in their future ALUCOBOND® activities.

1 Bank Mega Tower,
Jakarta, Indonesia

2 The Offices @ Central World,
Bangkok, Thailand

3 Hatton National Bank,
Colombo, Sri Lanka

4 Grand Indonesia Hotel and
Shopping Centre,
Jakarta, Indonesia


5


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7


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9

5 MacKay Memorial Hospital, Taipei, Taiwan

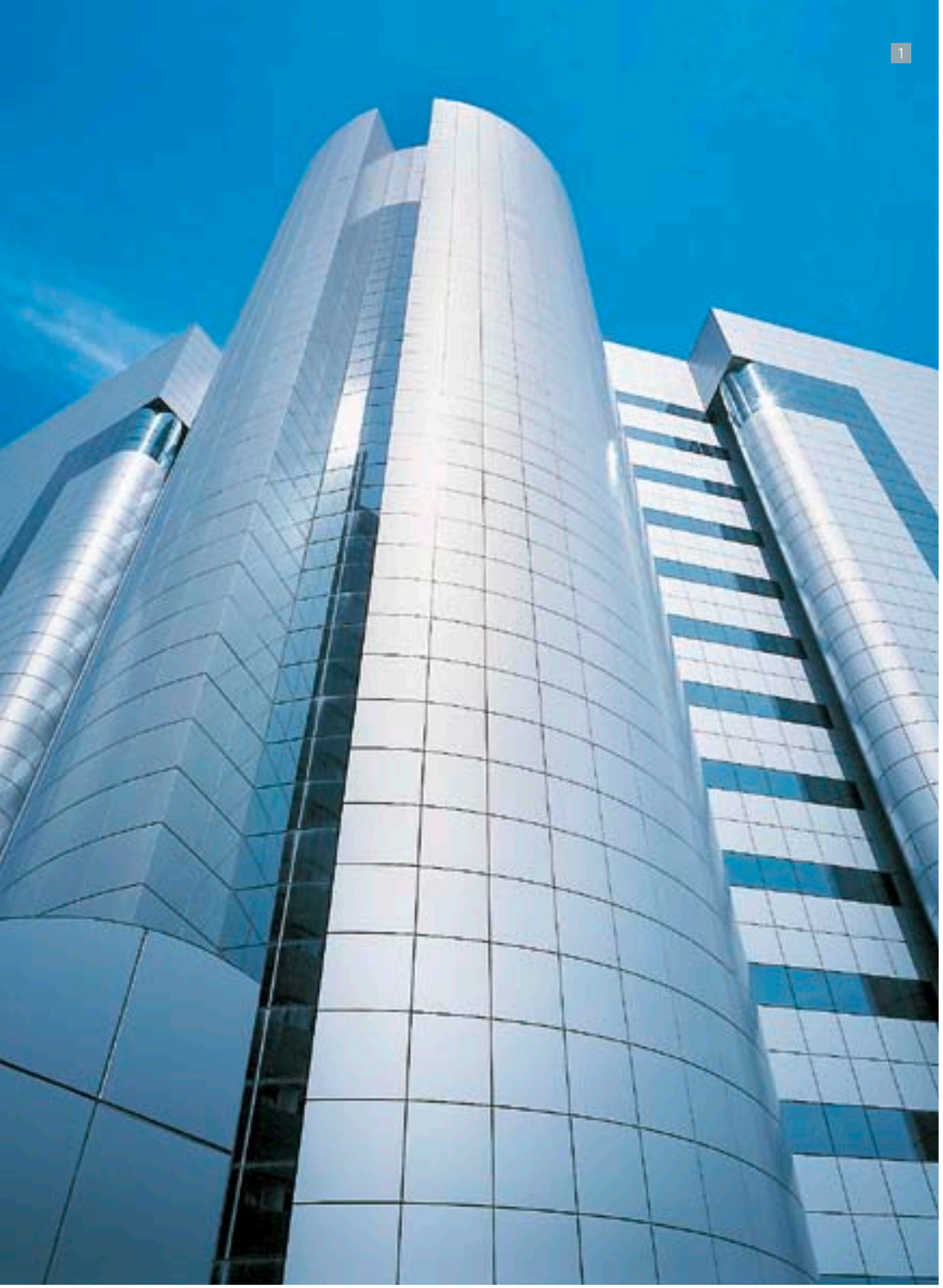
6 IndoChina Riverside Towers, Danang, Vietnam

7 Bashundhara Centre, Dhaka, Bangladesh

8 OneMcKinley, Manila, Philippines

9 BMW Import Centre, Tokyo, Japan

Projects in Asia

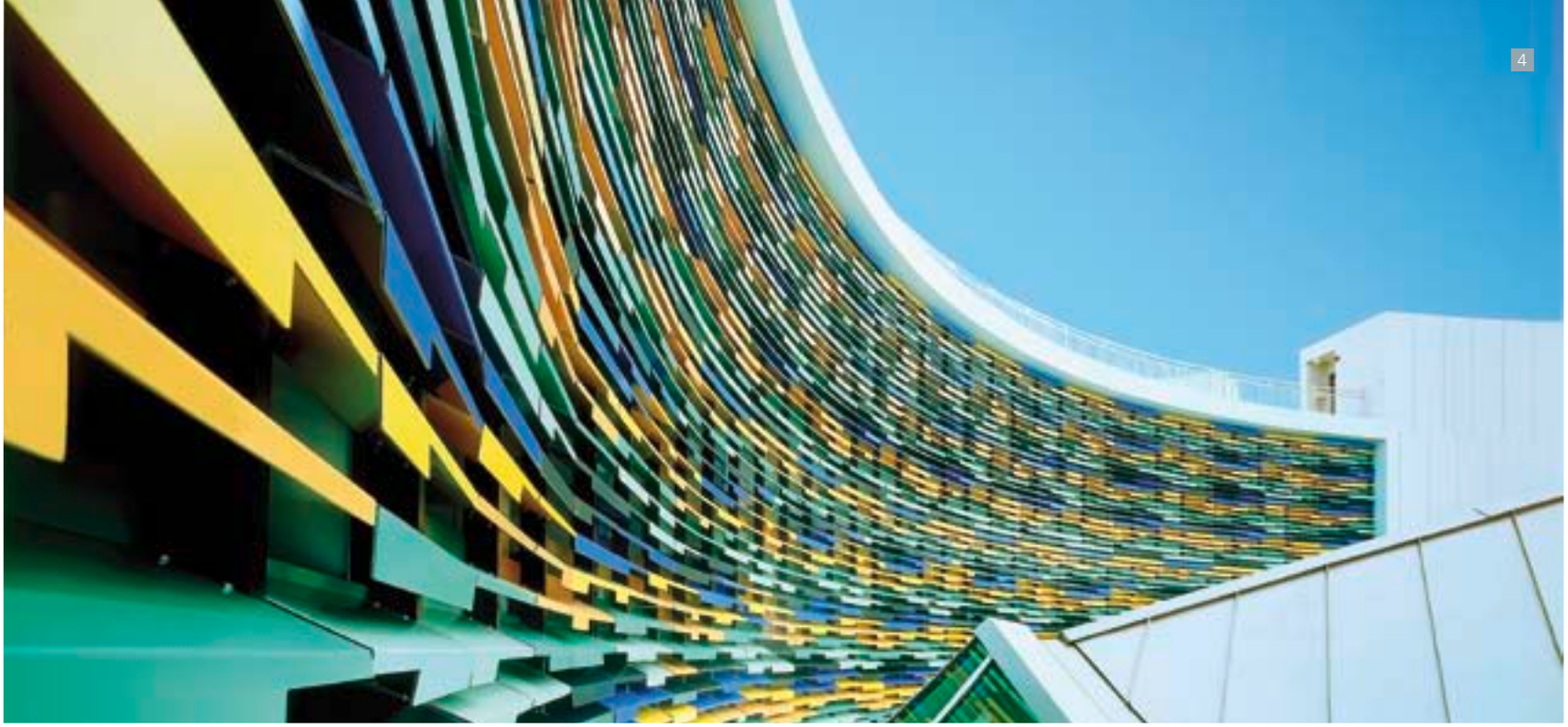


1 Labuan Financial Park, Labuan, Malaysia

2 Thai Farmers Bank, Bangkok, Thailand

3 Tutong District Offices, Brunei

Projects in Asia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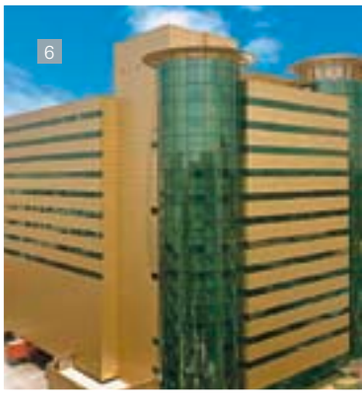
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4 AlMukminin Mosque, Singapore

5 Serdang Hospital, Selangor, Malaysia

6 Mustafa Department Store, Singapore

7 Suseong Cultural Centre, Daegu, Korea


7

Riviera Hotel, Seoul, Korea

Y.B. Lee

ALUCOBOND® in Korea

by Y.B. Lee, President, Y.B. International Company, Seoul, Korea

I first heard of ALUCOBOND® in 1985 when I was the Sales Director of Keun Hwa, a façade and cladding company in Seoul. A colleague of mine read and told me about this composite panel produced in Germany. We had a few cladding contracts on hand and decided to contact the manufacturer in Singen. Soon thereafter Claus Leyting visited us in Seoul and a long-term relation with ALUCOBOND® commenced.

In December that year we ordered the first 1 000 m^2 of ALUCOBOND® for use on some smaller projects, however, we already had some more prestigious projects on the drawing board, amongst others the Riviera Hotel in Seoul which Keun Hwa completed in late 1986. Major projects followed soon and it was in conjunction with the Hyatt Hotel (today Novotel) in Pusan that I first met Manni Wolf from Switzerland and Erich Schneider from Singapore. They came

1985

At the time the ALUCOBOND 'delivery stop' to the Far East was still in force, and with the support of the Alusuisse sales company in Tokyo, which was mainly trading in aluminium ingots, I had already created the prerequisites for a later intensive development of the markets in Korea and Taiwan. These markets were important metal-buying countries for Alusuisse Japan due to the presence of local aluminium industries. Non-exclusive representatives had endeavoured to sell ALUCOBOND®, but they were relatively unsuccessful as we had to proceed in a very 'reserved fashion' for known reasons. The abolition in the previous year of these particular restrictions conse-

to inspect the prototype unit Keun Hwa had prepared for the curtain wall of this project which was inaugurated in 1987 and served as a perfect ALUCOBOND® reference for future projects.

Three years later, at a time it became obvious that Keun Hwa would be closed I had the idea to start working on my own. It was coincidental that at about the same time Alusingen had decided to terminate the agency they appointed back in 1987. Claus Leyting and Erich Schneider, during one of their regular visits and having heard of my plans, encouraged me to take on the ALUCOBOND® agency for Korea. I accepted gladly and in May 1990 I realized the change in my career and established Y.B. International Company.

So, my connection with ALUCOBOND® is approaching the 25th anniversary. I would, therefore, like to congratulate Alcan Composites on their 40th, combined with my sincere expression of appreciation of the tremendous assistance I and my team have been getting from the Singapore office over all these years, and of the excellent support from and relation with everyone in Singen. Y.B. International is ready to go on for many more years, in spite of the highly competitive environment, caused by many local composite panel manufacturers.

Hyatt (Novotel),
Pusan, Korea

quently led to a new orientation in both countries, and very soon to initial realization of ALUCOBOND® architectural projects. The market partners newly appointed at that time remained closely connected to the product throughout all these years. Until today they have been loyal members of the 'ALUCOBOND® Family' in the Far East.

Pteris Global Ltd offices, Singapore

Patricia Pang

A Singapore Connection

by Patricia Pang, Architect with MYKP Architects, Singapore

It is with great satisfaction that we have been working with ALUCOBOND® for almost 25 years during which we enjoyed the cooperation of Alcan's Singapore team. The first project we used ALUCOBOND® for dates back as far as 1985 when the product was specified for the retrofitting of the TCB Building in Singapore, using silver metallic and ultramarine blue panels.

This was one of the first larger ALUCOBOND® projects in the Republic of Singapore at that time, and I well remember the great support we got from the local ALUCOBOND® representation. It was a new product then and hardly anybody in the building industry really knew how to use it. However, the ALUCOBOND® team had the answers. It did not only provide initial design support but also trained the appointed fabricator in the proper processing and finally supervised the installation of the panels. The result was highly satisfactory. This degree of assistance and support provided by the ALUCOBOND® team never reduced over all these years of our relation. It explains why meanwhile we specified and used ALUCOBOND® on more than 10 buildings in Singapore.

Currently we are working on the headquarters for Pteris Global Limited (formerly known as Inter-Roller Engineering Ltd), a building project requiring more than 4 000 m² of ALUCOBOND® panels for the cladding application of which more than 500 m² will be in the new Spectra Cupral colour. This project is approaching its completion.

TCB Building, Singapore

We have experienced ALUCOBOND® to be a contemporary material with a wide colour selection, allowing many design options and offering a variety of reliable fixing details. The product is supported by well trained local fabricators with good technical skills and, we can always call upon the Singapore ALUCOBOND® staff, whose technical know-how and expertise we can rely on. We have established trust in the ALUCOBOND® brand over the years and are confident that this will prevail also in future.

Before

After


GUAR


HOLDEN


NISSAN


PFAFF


PEUGEOT
PEUGEOT


PEUGEOT
EUGI


MITSUBISHI
MOTORS


mazda

David Davis

A new Horizon

by David Davis, Partner of Minale Tattersfield and Partners Ltd., Richmond, Surrey, UK

A milestone in the story of ALUCOBOND®'s use within the 'Branded Environment' coincides with my own involvement with the BP Horizon project in 1987 which was responsible for shifting customer's perception of BP gas stations from cave man to the state of the art. This revolutionary change was achieved through clarity of presentation. Out went all the multi-colour confusing graphics applied to flat, billboard type signage and in came a single statement of modernity in the form of shiny green sculpted architectural elements. With an ALUCOBOND® surface finish mirroring the cars which they served, BP petrol stations set the standard for years to come, not just because they looked so much better than their predecessors but also because they were cheaper on a like for like basis.

The proposition of better looks and lower costs was a client's dream. All possible when you realise that the lighting contained within the old back-lit acrylic and vinyl signs designs greatly elevates the purchase cost. Therefore, aluminium composite material (ACM) designs with less lighting means less cost, less maintenance and more energy efficiency although the challenge design-wise with less lighting is to create an attractive and recognisable night-time presence. If you look at companies who utilise opaque sign faces at night such as BP, Shell, Aral and Caltex, the problem is clearly eminently solvable.

For those of us concerned with brand identity issues the biggest positive of ACM is that consistency across a network of outlets could be achieved by using pre-finished factory coil coated panels that avoided both the intrinsic inconsistencies of hand sprayed panels and the de-specifying of paint resulting in premature colour degradation.

More of the same

So having projected BP into a brand leadership position within the fuel retail sector, the next client in my own and ALUCOBOND®'s

1987

Obviously following the example of the Mercedes Programme which had already begun years before and was still being supplied at that time – though to a lesser extent – other automobile manufacturers had also started their CID programmes throughout the world, for which ALUCOBOND® could successfully make a bid. As a result, 1987 marked the year in ALUCOBOND®'s history when the second 'CID wave' originated. With BP as the forerunner, practically all the well-known petroleum companies launched their reimaging programmes, both on an international and national scale, in the following years for restructuring and modernizing their petrol

portfolio had to be Shell who followed the same formula of differentiation through colour, shape, surface finish and lighting. The challenges of the Shell design were how to achieve the more complex 'Lazy S' profile and how to illuminate the opaque sign faces with a forward mounted light. It took much effort but the latest LED versions are very successful. Coaxing the relatively soft ACMs into different shapes has never been a problem. There are many simple forming and fabrication techniques available, notably pressing, folding or rolling and even novel hybrid systems used during the Shell development programme in Canada in 1990 which involved applying moderate heat and then draping over a mould. Simple, low-tech but effective.

Local and global

So while ACMs offer huge advantages for global rollout programmes, it's this last endearing characteristic of ease of fabrication which lends itself to smaller national projects. A classic example was when Dor Energy and Alon Oil Company merged their networks in Israel in 2006. Minale Tattersfield was commissioned to handle both the Corporate Identity change and application to the petrol stations. Working closely with the merged Dor Alon company's vice president Ze'ev Stein, we designed a canopy decoration system using ALUCOBOND® panels that were transported to site in flat packs then hand folded along the pre-routed grooves along the back so they could be hung over simple frames mounted to the ends of the canopy. The skill level required from the installers was little more than those required to assemble an IKEA chest of drawers. Installation was quick with no rejects due to a protective foil on the panels which is removed at the end of the process. Fitting the ACM around corners and sub-structures which were not quite square or not according to the installation drawing could be easily dealt with by cutting on site using simple tools.

To end on a more sombre note, a possible risk associated with ACM is product failure through delamination which fortunately we have never experienced but it nevertheless makes us feel more comfortable dealing with companies with a proven track record and a proper warrantee provision. And lastly recycling at the end of a products life should be borne in mind at the time of purchase. Composite materials generally are less well suited to recycling but there is an ALUCOBOND® service where the product is reground and eventually returned to the base components.

stations. Only the leading design agencies subsequently left behind their impressive 'business cards' for most of the programmes, and for realizing these projects the ALUCOBOND® sales and application teams contributed considerably on all continents. A large number of these programmes are still being supplied continuously today.

Nigel Young/Foster + Partners


PETRON
PETRON
Service
14.59
17.84
18.50
18.58


BP


galp

José Pimenta
de Castro

A ‘stony’ but successful way in Portugal

by J. Pimenta de Castro, Director, Alutrade Lda, Lisbon, Portugal

It was in 1981 when I was first introduced to ALUCOBOND® during an ITAF (International Technical ALUCOBOND® Forum) held by Alusingen. I was heading Aluvetica Lda at that time, the Alusuisse sales company in Portugal, and was invited to attend the meeting together with my colleagues of other European Alusuisse sales organizations. I remember that I returned home highly encouraged and interested to market the product in Portugal.

During the following years, we presented ALUCOBOND® to major architects, mainly in Lisbon. Though the product was really appreciated as an innovation, it turned out to be not so acceptable for local prestigious architectural projects at the time, when stone was still considered ‘the king of materials’ used. Some dreams appeared as a result of our efforts, but nothing really sizable materialized, except for some minor projects.

As late as 1991, however, our dreams finally started to become reality! First with the arrival of international CID (corporate identity) programmes like the BP and Shell petrol station reimage programmes and secondly, with the successful completion of a BMW project for which a German specification had to be met, prescribing that ALUCOBOND® was to be used.

These projects worked like case studies, developing keen interest by architects in the product. As a consequence we developed an exclusive network of partners, namely fabricators and installers keeping quality of distribution a top priority (no local stockists involved). These smaller companies had a mission not only to install and fabricate, but to also provide technical support which eventually led to a means of advertising. This policy is still working today with excellent results.

The sales had increased so strongly during the previous years, above all as a result of the intensive geographical expansion of our marketing and sales activities, that the capacity of the first ALUCOBOND® production line had reached its limit, despite several modifications and modernization measures. Product leadtimes jumped to 36 – 40 weeks at times and even the shifting of orders to USA only relieved the tight delivery situation to an insignificant extent. A second line had, therefore, already been ordered the preceding year and was put into operation in 1989 which consequently tripled the previous production capacity.

Porto Airport, Portugal

Porto Airport, Portugal

In the early years of our marketing activity there were times that our sales figures were not so brilliant. I remember that in one or the other annual ALUCOBOND® sales meeting I felt really 'ashamed' when comparing figures with those of my colleagues across Europe. However, I always received great support from the Singen ALUCOBOND® sales team and thanks to our excellent relation with our market partners our motivation and enthusiasm about ALUCOBOND® never disappeared, making results improve step by step. More recent years evolved into annual project awards of 100 – 120 000 m², a good m² ratio per capita.

Over the years competition increased sharply – good, bad, exotic and non-exotic – from all over, at home and abroad. However, the pursuit of excellence prevailed and ALUCOBOND® remains the No. 1 composite panel in the market. We continue to enjoy repeat business from architects and end users who have tried other cheaper 'ALUCOBOND® type' products.

In Portugal, most prestigious ALUCOBOND® projects have always been present over the last more than 10 years, the highlights of which were:

- EXPO 98 and Portugal Telekom in Lisbon
- Renovation of Lisbon Airport in 2002
- The 'jewel of the crown' in 2006, the new Porto Airport, built to follow the endeavour of the city to become the most industrial area in the country

For the nearer future (in spite of the current state of the world economy) I am not at all pessimistic. Various types of projects remain on the drawing boards and will be realized, in particular

1989

Early that year I assumed full responsibility for ALUCOBOND® at the Singen site where the setting up of a workshop for producing mock-up samples and training of customers in fabrication, for instance, could also be completed at the beginning of the year.

In the meantime, the 'ALUCOBOND®' brand had been registered in almost every country in the world. The product had become a truly 'global brand' and by then the synonym for aluminium composite panels – which is the case still today.

EXPO 98,
Lisbon, Portugal

Portugal Telekom,
Lisbon, Portugal

public buildings such as new hospitals, most of which specifying ALUCOBOND®. Saying this, readers may judge me as a conceited person with no vanity! But really, I am proud to have worked for such a long time for the best of the best, ALUCOBOND®!

On the occasion of the 40th anniversary of ALUCOBOND® I feel a sense of innovation in the air. New product features of different kind will come with new markets. Even with the current rate of globalisation, I am confident the brand ALUCOBOND® will not disappear and for ever be 'the original aluminium composite panel.'

To conclude I would like to add some personal words on the occasion of this anniversary. I will always remember those around and those no longer with us, the pioneers who made ALUCOBOND® successful and spared no efforts to support their partners in the markets, as well as my 'Portuguese ALUCOBOND® Family'. A special thanks to my daily contact at the Singen plant, Emanual Rafael (whom I probably bothered too frequently) and my good

That year, the 'Cost Centre Strategy' which was to regulate our relationship with the Alusuisse sales companies, was defined in Europe. Its implementation took place step by step and was completed two years later. As a consequence the personnel in the sales companies involved in the marketing and sales of ALUCOBOND®, were functionally reporting directly to the sales manager in Singen and the costs for this personnel were borne by ALUCOBOND®. The direct influence on the activities in the respective countries was thereby guaranteed.

In the European export business, Italy and the Iberian Peninsular had meanwhile developed as the markets with the highest sales,

friend Udo Rothmund (eighteen years as colleagues) whom I would specially like to thank for the trust shown in me, when I retired from Alcan three years ago, to open up my own trading business which is still heavily linked with ALUCOBOND®.

Hearty congratulations to the 'ALUCOBOND® Dream Team'

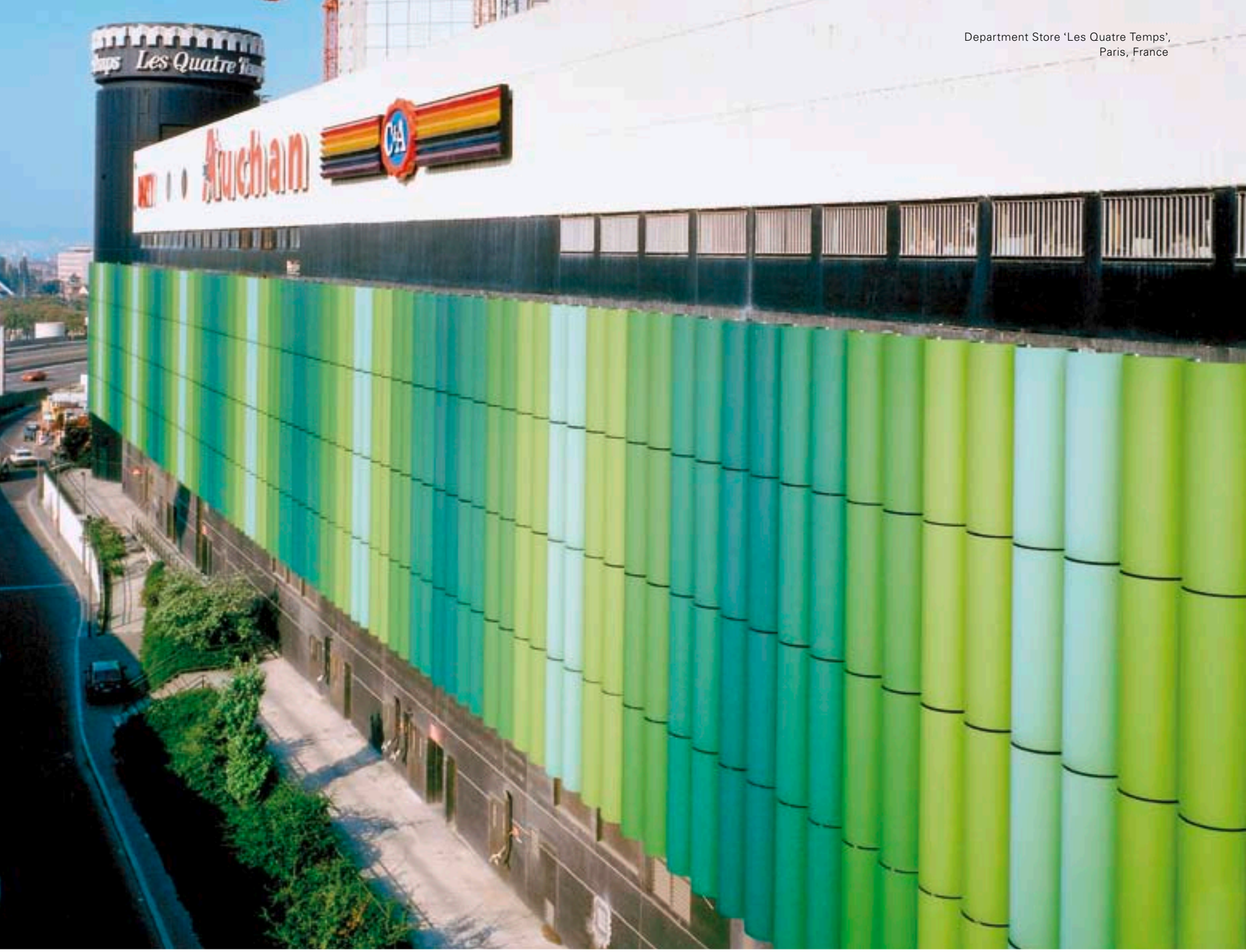
Portela Airport, Lisabon, Portugal

Portela Airport, Lisbon, Portugal

1989

and where ALUCOBOND® contributed to some extremely attractive and impressive projects. The largest single project in Europe ever to have been secured until now was also realized later on, i.e. the new airport in Porto, Portugal which used 120 000 m² of ALUCOBOND®.

Parts of Europe and Southeast Asia increasingly noticed the growing demands on their markets with regard to the products' fire classification which presented new challenges. Subsequently, the development of a non-combustible panel, namely A2, and the respective production technology it required began that year targeting at implementation within 2 – 3 years.



Department Store ‘Les Quatre Temps’,
Paris, France

Dominique Zolver

Interview with Mr. Dominique Zolver,

Director of Tim Composites , Cholet, France

by Guntram Eydner, Marketing Manager, PMU (Product Market Unit) Architecture Europe, Alcan Composites

Mr. Zolver, how was ALUCOBOND® launched on the French market?
ALUCOBOND® was first marketed in France in the early 1970s via the sales network of the Davum trading group.
At that time, Alusuisse France had taken over Perrier, a company mainly operating on the closures market, in order to also develop the sales of aluminium products in the building industry, and in 1977, under the company name Alusuisse Division Perrier, it supplemented its product range on the market with ALUCOBOND®.

Sales on the French market at that time reached approx. 9 000 m² p.a., but within 2 to 3 years the quantity could be increased to up to 40 000 m².

Originally, Alusuisse Division Perrier 'only' acted as an importer of the product. Its role was to market ALUCOBOND® in France and sell the product to fabricators as a flat panel.

But when we set up a small demonstration workshop to show our customers how to process the product, we were very soon requested by these customers to fabricate panels for them.

This was the the beginning of ALUCOBOND® doing in-house fabrication and this led to orders constantly increasing in quantity and significance.

What were the most important phases of your company?
At Alusingen's request, the ALUCOBOND® marketing was taken over by Alusuisse Produits Spéciaux (APS) in 1982. A team of salesmen and engineers was commissioned with the sales promotion, distribution and service for the customers, fabricators and stockists.

As a result, there were different stages of evolution and changes in the ownership structure of our company – for instance, Alusuisse sold its shares – and finally the present company, Tim Composites was formed, that has only been fabricating ALUCOBOND® for many years.

What were the first large-scale ALUCOBOND® projects in France?
The first large-scale ALUCOBOND® project was the shopping centre 'Les Quatre Temps' in the Paris district of La Défense, using 10 000 m² of the product.

Atlantique Montparnasse,
Paris, France

Later on, other well-known projects were also realized, such as the headquarters of L'Oréal (16 000 m²), the office buildings at Montparnasse train station in Paris (21 000 m²), the motorway toll station of St. Arnoult (14 000 m²), the prestigious building of Shiseido (6 000 m²), the presidential palace of Gabun (31 000 m²), the Futuroscope amusement park in Poitiers and recently the Casino Barrière in Toulouse (13 000 m²).

The most significant projects can also be viewed on our website **www.timcomposites.fr.**

In France there are not as many very large-scale projects as there are, for example, in Asia; they rather tend to have order volumes on a smaller and medium scale.

Motorway Toll Station,
St. Arnoult, France

Motorway Toll Station,
St. Arnoult, France

L'Oreal, Paris, France

How has ALUCOBOND® developed on the French market with respect to its range of applications?
In the 1980s, ALUCOBOND® was mainly sold via fabricators for simple façade claddings.

Gradually more and more architects wanted to enhance their projects with special forms and colours; ALUCOBOND® was and is optimally suited for this purpose. Thus the market increasingly geared itself to modern, sophisticated wall and façade claddings.

As computer science developed, 3D imaging now also became possible.

The installation of our first CNC machine in 1991 enabled very complex ALUCOBOND® elements to be produced in different shapes and sizes with very high precision and short production times, and thus larger business transactions and order volumes could be realized. Today, we operate three modern CNC machines for the fabrication of ALUCOBOND®.

Why does Tim Composites still use ALUCOBOND® today and not a less expensive material?
The first reason for this is the history of mutual success; Tim Composites and the predecessor companies have been known on the market for ALUCOBOND® and have been successful with it for more than 30 years.

The second reason is that we only wish to work with a high-grade product so that we stand out amongst our competitors.

ALUCOBOND® is outstanding due to its strong brand image on the market; furthermore, it is the most sold product of its kind in France.

It is the tandem of ALUCOBOND® / Tim Composites that gives assurance to clients and architects alike, and the feeling of confidence in a guaranteed product quality as well as the successful realization of their projects.

What are your visions for the future? What changes do you see?
ALUCOBOND® is the 'initial' product in the composites sector and it has to ensure that it keeps ahead of its competitors, or is at least always one step ahead, thereby remaining competitive and adapted to the market prices at the same time.

Finally it will be the architects causing ALUCOBOND® to be continually further developed with regard to its shapes and surfaces, etc. We always tell them: "You think up new shapes and we will do the rest".

The more complicated and specific the shapes are, the less competition we will have and the more our technology will stand out from others.

Tim Composites offices,
Cholet, France

Shiseido,
Orleans, Frankreich

Do you have any particular expectations of ALUCOBOND®?
The new products that have recently been launched, such as e.g. ALUCOBOND® spectra colours, ALUCOBOND® naturAl, ALUCOBOND® Wood Design or also ALUCOBOND® anodized look are all fulfilling our expectations.

At the moment we see no other special requirements on the part of the architects.

How do you judge the future application of our new products, ALUCOBOND® media and ALUCOBOND® photovoltaic?
The photovoltaic industry is a sector in France that is developing very fast.

The integrated ALUCOBOND® façade solution with photovoltaic elements opens up new additional perspectives as regards energy-saving and environmental measures, either taken or planned. Nevertheless, solutions of this kind can only be sustained and put into effect if they are innovative and economically profitable.

As to ALUCOBOND® media, this solely depends on the interest of the architects in concepts such as these. It is most important to make the entire ALUCOBOND® product range known to the architects, so that ALUCOBOND® media is also tendered for their projects. This necessitates an increased presence in the tenders; the basic requirement is, however, a sufficient presence on the market.

Do you see a risk of inferior product qualities being demanded on the French market in the future?
I do not think so, as the products used in building constructions in France definitely need a general technical approval. If the products become qualitatively inferior, the approvals will not be renewed.

But to gain market shares, efforts have to be made with regard to pricing.

What are the tendencies as regards approvals and standards?
As I have already mentioned, it is not allowed to use products without technical approvals.

Some companies try to go without having these approvals, but this is hardly possible for large-scale projects. The certification authorities do not grant an approval if the product is not recognized or qualified.

Today, a new qualification hurdle is also being developed in France – buildings of type HQE, 'Haute Qualité Environnementale', i.e. buildings that have to meet highest environmental quality standards. Evidence must be provided that the products used can be recycled and do not harm the environment.

It will be the regulations of the CSTB and the HQE that will be restricting the number of cheap imports.

As regards the fire qualification, the new European regulation will come into effect in France. In this respect, we are well set up with the products ALUCOBOND® plus and ALUCOBOND® A2 and will also be playing a leading role in the future.

Will ALUCOBOND® PE gradually be replaced by A2?
This is not certain. I do not see why ALUCOBOND® PE should suddenly be considered unsuitable for façades, just like that. We do not know the new European utilization standards in detail yet, but we shall gear ourselves to them in good time.

Mr. Zolver, thank you for the interesting conversation.

Leisure Park Futuroscope, Poitiers, France

Jo Roustang

Basic Principles of the ALUCOBOND® Sales and Marketing Strategy

by Jo Roustang, formerly Sales & Marketing Manager Architecture, Alcan Singen GmbH, Singen, Germany

In the mid-sixties, during my sales activity at Aluminium Walzwerke Singen, I had already heard of the development of the new product, named ALUCOBOND®. However, I did not experience its market launch, as I took over other functions within the group in Zurich, and thereafter in France, as from early 1969. My first encounter with ALUCOBOND® did not take place until many years later. In the meantime I was working in the Sales of Alusuisse Produits Speciaux (APS) in Paris. Claus Leyting whom I had already become acquainted with during my time in Singen, and who had taken on the responsibility for ALUCOBOND® in Singen after returning from his assignment in South Africa, wanted to reorganize the ALUCOBOND® sales in Europe, in 1982 entrusted us with the marketing and sales responsibility in France. Prior to this appointment, the respective exclusivity was with a metal-construction company that became our major customer in France in the following years. Two years later I assumed the overall responsibility for all activities at APS.

We knew of the highly interesting properties of ALUCOBOND® and were aware of its diverse application possibilities in the different market segments, also in France, such as in architecture, industry, the transport sector and for display applications and corporate identity programmes. Very soon architecture proved to be a major field of application for ALUCOBOND® and thereby confirmed the trend that had already been determined in other European markets.

The new management in Singen had recognized the fact that the architecture market in particular required a special sales strategy. Although the acceptance of ALUCOBOND® as a new product in this market segment continued to grow fast, enormous efforts were still to be made to acquire for example the necessary approvals in numerous countries for the wide variety of applications. Amongst other tasks, specific processing and application techniques had to be developed. It also became clear that an ‘anonymous’ marketing approach for ALUCOBOND® would not be successful in the long term. It seemed important and critical to be involved in the architectural projects from the very beginning in each case, and to be aware of their requirements, to ensure an optimum ALUCOBOND® application. This meant that the marketing strategy had to be aligned to the decision makers in the building industry, such as architects, property owners, designers and investors, and the marketing concept adjusted accordingly.

Bodegas Legaris, Valladolid, Spain

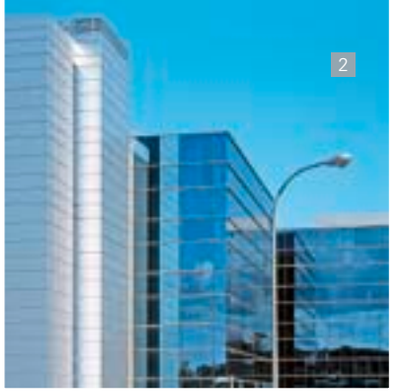
In constant pursuit of this strategy, construction engineers and / or architects were, therefore, hired to form the field sales force in each European country. They were to be in the position to answer project related questions and propose respective technical solutions. For APS too, the marketing and sales exclusivity for France as from 1982 was linked with the obligation to expand and adjust the composition of the field sales team in France accordingly.

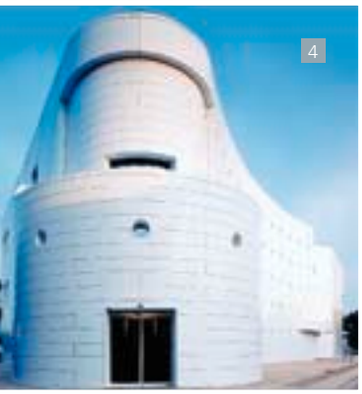
In 1991, I was additionally assigned the task by Alusingen of implementing this strategy in all European Alusuisse sales companies which consequently led to the respective architecture sales teams being administered as Singen's cost centres in the following years.

As the APS activities were integrated in a new Alusuisse company at the end of 1994, I assumed the function of the Sales & Marketing Manager Architecture at Alusingen in the following year, until my retirement in 2003. During this time, the successful strategy in Europe was also followed for expanding markets outside Europe, and intensified in countries where its implementation had already begun earlier on.

Decisive for the success of soliciting ALUCOBOND® project orders also was the orientation towards fabricators who, through their specialization with ALUCOBOND®, meet the demands of the many decision makers for new and special shaping of façade elements. Most important also was and still is to ensure the short-term availability of ALUCOBOND® on all European markets. This is achieved by working with national distribution channels specializing in the construction industry. In other countries the marketing was entrusted to exclusive representatives who guarantee access to and availability of ALUCOBOND®.

Thanks to this strategy and due to the organizational structure, ALUCOBOND® is the leading composite panel world-wide today, and the global sales and distribution network recognized for its high specialist competence.





1 Acerbis Italia,
Bergamo, Italy

2 Metro Racesa Building,
Madrid, Spain

3 Trade Fair Milan,
Italy

4 Banca de Credito Cooperativo,
Fornacette, Italy

5 Le Forme,
Perignano, Italy

6 Technology Park,
Huesca, Spain

Projects in Spain, Italy and Portugal

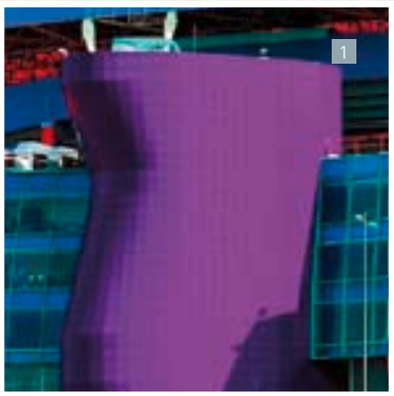
7 Columbia 15 Building, Valencia, Spain

8 Le Torri Lombarde, Milan, Italy

9 Cogefrin offices, Bologna, Italy

10 Milan Polytech, Italy

11 Azara Building, Huesca, Spain



1 Stadium,
Aveiro, Portugal

2 Una Hotel,
Malpensa, Italy

3 Technology Park,
Huesca, Spain

Projects in Spain, Italy and Portugal

4 University, Barcelona, Spain

5 Torre Francia, Valencia, Spain

6 Offices and Factory Forghieri, Maranello, Italy

7 Stadium, Coimbra, Portugal


France Telecom
Cable


Oldfield
County Primary School
Education Services


Profiel
2000


P

1991

Display applications

In the course of the last 20 years or more, ALUCOBOND® had also gained a leading position in the wide range of display applications. The sales development proceeded at a similarly rapid speed as in architecture, but concentrated mainly on Europe. Especially on the display market, the product found itself competing increasingly against other materials that were mostly cheaper. In addition, ALUCOBOND® was 'over-dimensioned' in its configuration at that time for a large number of applications. Therefore, we decided to introduce DIBOND® which was to meet the requirements in a similar way for almost all the display application areas. This product with its varied surface designs, gave the sales on the display market a new momentum, with the result that I decided shortly afterwards to separate the marketing and sales responsibilities in Singen for the architectural and display areas.

Parallel to DIBOND®, the market introduction of ALUCOBOND® eco also took place, and its development was encouraging, particularly in the area for CID applications.

Media One,
Richmond, USA

Changing from Old to New – ALUCOBOND®, the perfect material for retrofitting buildings

by Hans Peter Held, formerly Communication Manager, Alusuisse, Zurich, Switzerland

ALUCOBOND® – the material that inspires creative architects to reach top-performance in design – is particularly suitable, too, for ideal structural solutions, when it comes to modernizing old buildings. With a sense of responsibility the architects avail themselves of the opportunity to not only renew the substance of a building to be renovated, but also to examine the effect it has on its environment and, if necessary, redefine it. And using the modern materials and methods they have at their disposal, they succeed in converting such buildings into a state of current, technical standards and in also adjusting their function to meet requirements of today.

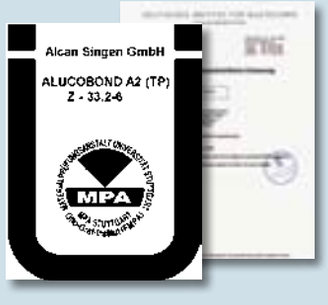
The following international examples are to demonstrate how valuable – and in a large number of cases – how decisive ALUCOBOND®'s contribution has been to the successful retrofitting of older buildings:

From traditional architecture to a high-tech look

When the 'Media One' Building in Richmond, Virginia, USA in need of renovation changed hands, the new owner – a company operating on the high-tech cable market – also wanted to adapt the former factory's exterior with its face brick façade to his own requirements and the futuristic image of his company.

After thoroughly evaluating various alternatives, the architects' office commissioned with this renovation, Curt Davis & Partners, finally decided to clad the old brick wall with a rear-ventilated aluminium and glass façade, which was completed in 1997, using 1 500 m² of silver-grey ALUCOBOND® panels which give the company headquarters an elegant look. However, this material was also chosen because the costs for its maintenance are very low and because it is extremely durable.

The German re-unification was in fact almost a part of history by this time, but the need for renovating the buildings in the former GDR had now become really apparent. It was tremendous. Particularly in need of urgent renovation were the old, precast, concrete slab buildings, which as a rule were blocks of flats that



ALUCOBOND® A2 – Approval Certificate

Fully compatible with a contemporary, overall, architectural concept, ALUCOBOND® was also used for the exterior signing system of the retrofitted Media One Building.

The Cyberhaus in Magdeburg

What does a façade material like ALUCOBOND® have in common with modern communication? A great deal – as proven by the first 'Cyberhaus' in the German University town of Magdeburg, where the local building society by the name OVG Wohnungsbaugenossenschaft, as the landlord of a high-rise building complex in need of modernization, had already attached great importance to the progressive communication possibilities when renovating the interior and providing the building with an ultra-modern wiring system. In addition, a solar collector had been installed for reducing the operating costs of the water-heating system.

Apart from this, the building society wanted to use the best possible materials and technology available for the external renovation carried out in 1999. The decision was for a rear-ventilated wall cladding the numerous advantages of which are well-known and generally accepted, i.e. the moisture is conducted away from the building structure, the heat and sound protection are very good and it serves as a barrier against wind, rain and dampness. The commissioned engineering office, F. Rudolf, chose ALUCOBOND® to be used. Decisive in this respect were the large variety of panel sizes, the excellent shaping possibilities of the individual elements, also on site, and the large selection of colours.

Cyberhaus, Magdeburg, Germany

1992

had found new owners in a great many cases. Numerous cladding contracting companies from West Germany set up subsidiaries in the East and contended for the many façade renovation projects. The market introduction of non-combustible ALUCOBOND® A2 in 1992 therefore came just at the right time. The new production line set up for it, i.e. a continuous double-belt press line that had been developed specially for this project, was put into operation beginning of the year. The 'general approval by the building authorities' was also granted punctually. ALUCOBOND® A2 adorns hundreds of buildings in Germany today, both in the East and West, with

'Gustavo' Residential Building,
Berlin, Germany

Using ALUCOBOND®, the horizontal segmentation of the 16-storey block of flats could also be kept to the jointing pattern. Solar panels are also integrated in the ALUCOBOND® façade. ALUCOBOND® and ALUCORE® were implemented likewise as high-strength mounting panels for cooling ceiling elements or radiant ceilings.

A residential tower as Europe's largest work of art

Just how closely function and aesthetics are interwoven in architecture can also be seen in the area of modernizing old buildings. A really spectacular example of this can be found in Berlin, the dynamic capital city of Germany, where the conflict between historical heritage on one hand and the will to break into a new era on the other, have produced a particularly exciting contrast. In the course of revitalizing a monotonous, 21-storey high-rise building in the suburb of Lichtenberg, that originated from the GDR era, Europe's largest work of art emerged, so to speak. Here, spread across the surface of almost 15 000 m² of a façade cladding, huge, colourful, poetic pictures by the Spanish painter, Gustavo, can now be viewed. He was entrusted by the workgroup for town planning and architecture with the enlivening of the new outer skin of the once dismally panelled building.

colourful and sometimes spectacular, rear-ventilated claddings that also caused a stir internationally and were 'decorated' with diverse awards.

As a consequence, ALUCOBOND® A2 also enabled our access to specific projects in Switzerland and Austria, as well as in some of the Asian countries such as Singapore and Malaysia which, due to special fire regulation requirements, could otherwise not have been realized with aluminium composite panels. More recently the

At the beginning, the project was suspected of having all the features of an adventure or experiment. The difficulties that resulted from transferring Gustavo's genial and sometimes bizarre figures onto the façade in the required size, seemed almost insurmountable, as they were meant to spread across the block of flats in an uninterrupted flow, as far as possible, with the result that the parts cut off and the projections at the joints had to be reduced to an absolute minimum.

An optimized solution could only be reached using ALUCOBOND® panels. A computerized puzzle consisting of twelve different colours was worked out, cut and routed from 11 000 individual, differently shaped panel parts. With a code consisting of letters and figures these parts could then be pieced together exactly and 'just in time' to form a building façade. The largest panel measured 1 x 3 m, and the smallest – the eye of a seated figure – only approximately 5 x 5 cm. In this way, the renovation was completed in 1999 and conjured a colourful accent to the town picture that not only the residents of the 296 flats were extremely proud of, but also the whole suburb.

Conversion to an attractive museum

An old factory hall that is no longer in use, is not always necessarily destined to become an industrial ruin that will stand empty for years or even decades, steadily go to wrack and ruin and be finally levelled by soulless excavators to make space available for new projects.

Fischer Architects of Munich have shown with its conversion of an empty factory building in Ingolstadt, Bavaria, that it is possible to breathe new life into a profane, functional building that has served its time. Using simple means, they converted the building into a museum in which the large steel sculptures of the sculptor, Alf Lechner, are fully shown to advantage on two levels.

Their solution which was put into effect in the year 2000 with a rear-ventilated façade cladding caused something like a sensation. The cladding, a silvery, shining shell of smooth and flat ALUCOBOND® panels, fixed onto an aluminium sub-structure, forms a 'neutral', closed envelopment that in no way competes with the works of art exhibited in its interior.

1992

product has also been introduced to an increasing extent on East European markets for façade cladding.

The 'ALUCOBOND® product family' had already found a market segment in architecture in the past, that dealt with the retrofitting of old buildings and the different types of products were literally predestined for this purpose due to their diverse properties. Thus we can find a large number of exemplary projects that have already been realized world-wide and assume that this market segment will be of increasing importance in the future.

Alf Lechner Museum, Ingolstadt, Germany

Art is, therefore, able to nicely unfold in the Alf Lechner Museum. The conversion project was awarded the 1st Prize by the 'Deutsche Fassadenpreis 2001' for rear-ventilated façade claddings, in the Renovation category. In the appraisal of the prize-winning building, the jury praised the clear-cut appearance of the Museum: "It has no detail wanting to show off, and there is no edge profile or frame to disturb the clarity of the box as such. The real art of detailing is when one does not notice that there is one."

Old University – new landmark

With its 10 000 students, Highbury College, located in the historic sea port of Portsmouth, is one of the most eminent universities in England. In order to make the residential situation more attractive for the students on the Cosham Campus, an extensive modernization programme was launched in 1998 for the buildings from the 1950s. ALUCOBOND® was used for the renovation of some of these

Highbury College, Portsmouth, England

buildings, mainly because of its excellent suitability in the maritime climate influenced by the sea nearby.

The most outstanding change was made – under the management of the architects' office, 'Studio 4 Architects' – to a previously sad-looking block of flats that was elegantly clad with ALUCOBOND® panels in the College's colours, blue and silver metallic.

A design element points up to the sky at the top like a turquoise colour tail fin, giving the whole building a flair of vitality and a certain

NOL-Building, Singapore,
before

airiness. This way, Highbury College gained a new emblem in 2001 that was granted an award in the following year in the Competition for Architecture of the Portsmouth Society in the category of 'Best Renovations'.

A gigantic ship's funnel sends its greetings

NOL – Neptun Orient Lines – is the flagship of the merchant navy of the Southeast Asian city state of Singapore. The headquarters of the company established in 1983 with 26 storeys and the striking form of a huge ship's funnel, was originally clad with ceramic tiles. After less than two decades, however, it was discovered that the tiles were beginning to detach from the outside wall. This safety risk was to be eliminated by completely renovating the façade.

Due to the height of the building and the wind loads prevailing close to the sea, the demands on the architectural solution and the material to be used were particularly high. In addition, the owners demanded that work be continued in the offices during the retrofitting.

Thus ALUCOBOND® plus composite panels were chosen for the new cladding, and mainly also for keeping the additional weight of the structure as low as possible. 22 000 m² of panels were used for the retrofitting which commenced in 2001 and could be completed in only nine months.

NOL Building, Singapore,
after

Residential buildings,
Dortmund, Germany,
after

Residential buildings, Dortmund, Germany,
before

Southern colourfulness for a housing estate in the Ruhr district.

Aiming at an economic residential consolidation, Ruhr-Lippe Wohnungsbaugesellschaft decided to modernize its housing estate built in the 1960s in the Dortmund suburb of Scharnhorst, and change its character in an exemplary way.

Residential buildings,
Dortmund, Germany,
after

Training Centre Bull, Massy, France

The architect assigned with this project, Andreas Hanke, planned to replace the soberness of these blocks of flats with their exposed aggregate concrete façades, by a friendly, pleasant exterior. By accentuating the different buildings with coloured compositions that were 'borrowed' from historic town views, and by structuring them with classical architectural elements, an Italian, a French and a Californian housing estate were created. The modernization project under the name, 'Life is bright and colourful' was realized in 2007 in compliance with the demands for sustainable construction, for instance with its energy-saving concept and thermal insulation.

The façade solution of Scharnhorst, using 45 000 m² of ALUCOBOND® plus panels, was awarded one of the coveted BEX Prizes for Architecture in 2008

Reference to a significant historical style

The Bull Training Centre built in the 1970s in Massy near Paris, needed extensive renovation. At the request of this IT company, the architecture of the modernized company building was to reflect the dynamic spirit of this economic sector, both inside and out. The appearance of the façade was to resemble stainless steel as closely as possible, both in its colour and structure so as to reflect a modern, high-tech image. Stainless steel as such did not come into play as a structural solution, on the one hand due to its 'corrosive' behaviour and the requirements for its maintenance, and on the other, because the existing curves of the building demanded extremely precise panelling. The structural solution of the architect's office of Axel Schoenert was, therefore, implemented with a façade cladding of weather-resistant ALUCOBOND® composite panels and aesthetic sun shields.

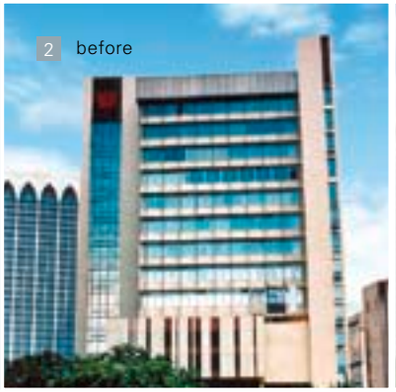
The design with the soft, rounded forms was inspired by the 'Streamline' movement, that had a decisive influence on the architecture and product design in the USA in the 1930s.

1 Residential buildings
Zingster Straße, Berlin, Germany

2 UOL Building, Singapore

3 Residential buildings Am Seeufer,
Magdeburg, Germany

4 Auto Centre, Gera, Germany



5 Four Seas Communication Bank, Singapore

6 Railway Recreation Centre, Bautzen, Germany

7 Telefonica H.Q., Sao Paulo, Brazil

8 Nissan Independence, North Carolina, USA

IBM Tower, Singapore,
after

Success Takes Time

by Erich Schneider, formerly Managing Director,
Alcan Alucobond (Far East) Pte Ltd., Singapore

This Case Study is to illustrate how long it can take to secure an ALUCOBOND® order for an architectural project and who our customers are. Many ALUCOBOND® sales started years before an order was finally received. Let's look at the various stages and the work involved in the case of the retrofitting of the IBM Tower façade in Singapore (now known as Fuji Xerox Tower).

The project

The IBM Tower, at the edge of Singapore's financial district, was originally constructed using precast concrete panels lined with ceramic tiles as façade elements. The building was about 15 years old and looked weathered and out of fashion, compared with its neighbouring towers. In some places, rainwater penetrated the joints and both the thermal and sound insulations did not meet today's standards anymore.

The initial ALUCOBOND® introduction

In April 1997, in one of his regular presentations to architects and building owners, our sales manager had updated the key executives of City Development Limited (CDL), one of the big property developers in Singapore, about the latest available ALUCOBOND®

colours and the many possibilities of using the panels on new and existing buildings. Product documentations and samples were past to the company's building product library for future reference.

Preparing design proposal and specification

In January 1999, the CDL architect invited us to discuss retrofitting the façade of the IBM Tower (renamed Fuji Xerox Tower after completion). Based on the available building plans and the architect's design requirements, our technical team proposed some cladding details and assisted the architect in preparing the tender specification. We also recommended suitable cladding contractors to the owners and their consultants to be invited to participate in the tender process.

During tendering stage

After tender was called for the retrofitting of the façade, we quoted our panel prices to the various participating contractors and provided them with suitable design and fabrication details. While some of the contractors prepared their bids based on using our panels, others offered different materials.

During tender evaluation

The architect and the responsible engineer requested our advice on the various proposals submitted by different contractors.

After award of contract

In October 1999, the owners signed the contract for the supply and installation of the new façade with the successful bidder. We now assisted the selected contractor to work out fixing details and to finalize the typical cladding design. With our experience, we helped to value-engineer components and design special tools for the economical fabrication of our ALUCOBOND® panels.

Colour selection

In July 2000, the owners had to decide on the colour scheme. To visualize the effects on the actual building, the contractor had to install mock-up samples on the façade, with ALUCOBOND® panels provided by us in various colours.

Preparation of final design

This necessitated structural calculations through the finite element method (done by our R&D experts in Switzerland) to determine required stiffeners and to prove the panel strength, as well as the optimization of panel sizes to reduce panel wastage and to suit Alcan Singen's production requirements.

Order secured

In December 1999, we finally received the official purchase order from the cladding contractor, comprising 24 400 m² of ALUCOBOND®.

After sales service

While our factory processed the order, our work in assisting the contractor to prepare fabrication continued.

IBM Tower, Singapore, before

IBM Tower, Singapore, after

After the arrival of ALUCOBOND®

In August 2000, the first batch of our panels arrived in the workshop of the cladding contractor. We advised on the proper storage and handling of our ALUCOBOND® panels in the factory and on site, helped training workers in fabricating panels and did spotting of fabrication mistakes.

Completion of project:

In November 2001, the cladding works were completed. It took

- 4 ½ years, from product introduction to completion of the retrofitting
- 2 ½ years, from 1st contact to receipt of order
- 9 months, for installation on site

Our efforts – our risks – our success

It took 2 ½ years from the initial presentation of our material to securing an order. For a full year our sales and technical team spent many hours to service our customers.

Product promotion and technical advice on system solutions were provided free-of-charge. There was no guarantee that we would get an order for this project, as the selection of the panel material is normally left to the cladding contractor (specified as ALUCOBOND® or equivalent).

Personal relations and the quality of service strongly influence the result, but for the contractor the final price is still the most important factor in deciding from whom to order the material.

Our customers

We have three levels of customers to serve:

- Specifiers: Building owners, architects, consultants
- Main contractors: They coordinate the entire building works
- Specialist sub-contractors: The cladding contractor

All are equally important decision makers on **our long way to success**.

Cheong Kah Thong

ALUCOBOND® in Malaysia – and words of recognition

by Cheong Kah Thong, formerly Managing Director, Nam Fatt Marketing, Kuala Lumpur, Malaysia

In late 1992, Nam Fatt Marketing Sdn Bhd in Kuala Lumpur acquired the sole agency for the distribution of ALUCOBOND® in Malaysia. I was their Managing Director at the time and impressed with the product's technical capabilities. We took over the sole agency from another company. A small team was established to promote the product into the then vibrant building construction market. Erich Schneider, ALUCOBOND®'s Regional Manager for Asia and working out of his office in Singapore, was most helpful in giving us product training, and encouragement, holding our hands through some early projects to give us confidence and experience.

In the course of representing ALUCOBOND®, several instances added to our confidence and respect to more than the product's excellent quality and performance. The people and the company's policies gained our respect and confidence, and that of architects / specifiers, contractors and fabricators. Some instances worth mentioning were:

Menara Boustead, Kuala Lumpur

This job was completed before Nam Fatt took over the agency. The paint on the ALUCOBOND® turned out to be faulty and was peeling off the panels.

Alusuisse at their own cost replaced all panels, inclusive of cost of disassembly and re-installation. Such remedial works performed without finger pointing to faults of others were virtually unheard of before. Of course, we took advantage of the situation to highlight to all building owners, architects and fabricators on Alusuisse's commitment to honouring their warranty. An adverse situation was turned to a unique advantage, especially when generally most manufacturers and agencies would apportion blames on others to avert financial commitment. Personally, I heard architects and fabricators quoting this example to building owners in their efforts to secure ALUCOBOND® as the preferred product over other brands or products.

Menara Boustead,
Kuala Lumpur, Malaysia

Public Bank,
Kuala Lumpur, Malaysia

Public Bank Building, Kuala Lumpur

Due to some delays in the Singen factory, Alusuisse flew in an initial 2000 m² of ALUCOBOND® to honour their delivery dates to enable the fabricator to keep to his schedule of work. The balance of the order was shipped in time to meet requirements. Again, praises were sung and architects / fabricators were further convinced on ALUCOBOND®, and those representing the product.

Vision City, Kuala Lumpur

The project was secured by a Korean contractor, who insisted on getting ALUCOBOND® from his Korean supplier. The supplier was our counterpart, Y.B.International. Y.B. directed them back to Nam Fatt for supplies in Malaysia, honouring the fact that we were the exclusive distributor for this market.

All Asian country agents gather annually in a 'Family Meeting' organized by the Singapore ALUCOBOND® sales office. The growth of the business throughout Asia was largely due to such acts of fair dealings, confidence and mutual respect amongst the country distributors fostered through the Family Meetings.

Kuala Lumpur International Airport

The mutual trust that had evolved allowed us in Nam Fatt to be totally transparent in our dealings with Alusuisse through the five years of pushing for this project to its successful culmination as one of ALUCOBOND®'s significant projects. The numerous visits to consultants, main contractors, project managers, site visits by Erich Schneider and Alusuisse's technical support team together with us enhanced our position. Final confirmation was made by the project managers during their visit to the Singen plant. In all, more than 90000 m² of ALUCOBOND® A2 were used, making it one of the largest prestige projects done.

These are the thoughts I shared fondly as the Managing Director of Nam Fatt Marketing, ALUCOBOND®'s sole agent in Malaysia then. The relationship was fair, understanding, supportive, no nonsense yet rewarding for the company and personally satisfying.

Perhaps I was a one of the few that joined the company after having represented it as agent. I joined Alcan Composites China in March 2000 and worked as its Director of Marketing for two years during which I gained a different perspective.

In the meantime, the white spots on the ALUCOBOND® atlas of Asia had become very colourful thanks to the excellent work by the team in Singapore. With only a few exceptions, such as Myanmar, Laos and Cambodia, ALUCOBOND® was represented in all the countries by highly motivated, successful market partners.

They were highly instrumental in the fact that Asia, headed by China, had become a fast growing market over the years with support from Singapore, and a large number of attractive architectural projects give evidence of this development. The largest single ALUCOBOND® project up until now was also realized in Asia, i.e.

Kuala Lumpur International Airport, Malaysia

The fair dealing, no nonsense, supportive and understanding aspects perpetuated. I remember that Claus Leyting, who worked fervently, would fly in and throw himself selflessly into work together with us immediately. He would discuss and go through our challenge areas and worked with us towards solving them. He has my admiration to this day. Mostly, he held the team together. He allowed no time for himself to take in local sights.

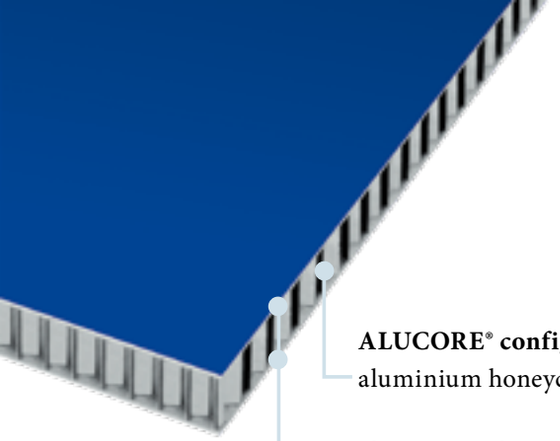
The Annual Family Meetings concept was then also promoted in China for the regional distributors. There was acceptance from the start and I am certain that continued efforts in this direction contribute to wider benefits for the company and distributors alike.

I have been a proud member of the global ALUCOBOND® team, both as an agent and distributor as well as an employee of Alusuisse (Alcan Composites), through to my retirement a few years ago. Having been linked with such a great product always was a pleasure for me and I wish the ALUCOBOND® product family many more years of success.

Kuala Lumpur International Airport, Malaysia

1992

the Grand Indonesia in Jakarta with 145 000 m². This was primarily a hotel renovation with a newly integrated shopping centre – originally Hotel Intercontinental – that had already been my domicile quite often during the late 60s during my visits to Jakarta, when – for me – ALUCOBOND® was still in the far distance.



ALUCORE® configuration:
aluminium honeycomb core

aluminium skins

1 Van Bodies – Side Flaps

2 Ship-building – Interior Installations

ALUCORE® applications – Transport and Industry

During the phase of adapting the generally known double-belt press technology to today's ALUCOBOND® A2 production process, it already became evident at an early stage that this process and the production line that went into operation in 1992, were also ideally suited for the continuous production of honeycomb core composite panels. The process of expanding the outsourced honeycomb core, which still required a separate working step for preparing it, needed to be integrated in the line. In 1994 this respective line extension was completed and we began to introduce ALUCORE® in numerous application areas. In 2002 the commissioning of a complete, self-designed and most sophisticated machine for the continuous production of the expandable

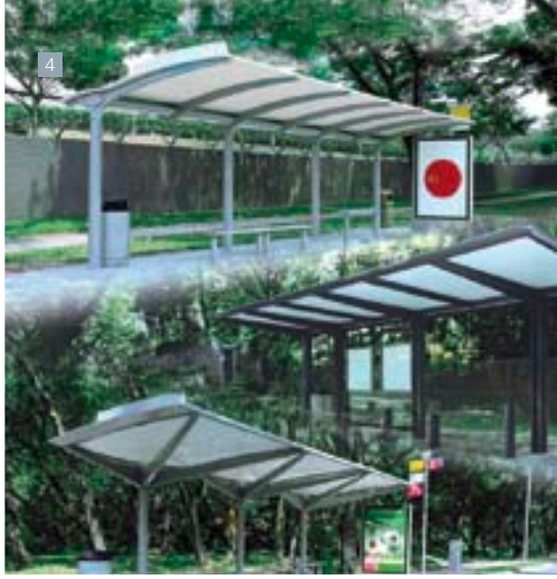
3 Mobile Homes –
Exterior skins and Interior
installations

4 Bus Stop Shelters

5 Ship-building –
Interior Walls and Ceilings

6 Elevator Linings

7 Kiosks



1994

aluminium honeycomb core followed, based on a unique process that was patented world-wide.

The product excels by its high bending strength and extremely low weight, and is thus particularly suitable for applications demanding very stringent technical requirements in the façade and roofing areas, e.g. in the case of extreme wind loads or for large, self-supporting roofs. A great many so-called 'flying roofs' and façade projects have been realized since then using the product, but meanwhile ALUCORE® has also stood the test excellently in numerous industrial applications and in the transport area.

1 Nanhui Gymnasium,
Shanghai, China

2 Academy for Leadership,
Pudong, China

3 DST Building,
Brunei

4 Kallang Paya Lebar
Tunnel Ventilation Building,
Singapore

5 Pedestrian Bridge, Chalon-sur-Saône, France

6 Carrefour Shopping Centre, Krakau, Poland

7 Art Museum Reina Sofia, Madrid, Spain

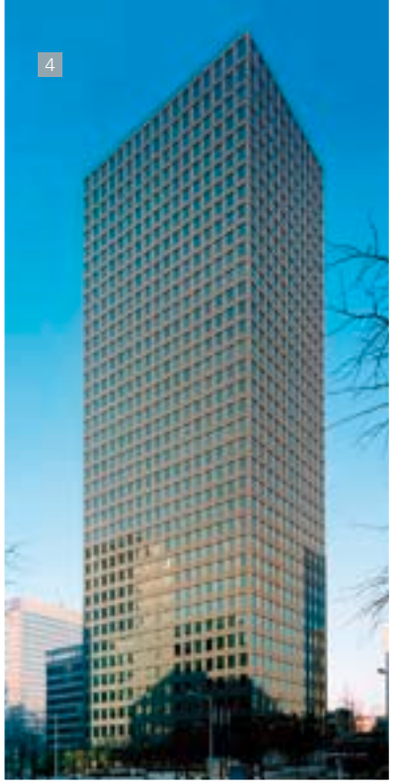
8 Art and Congress Centre, Lucerne, Switzerland

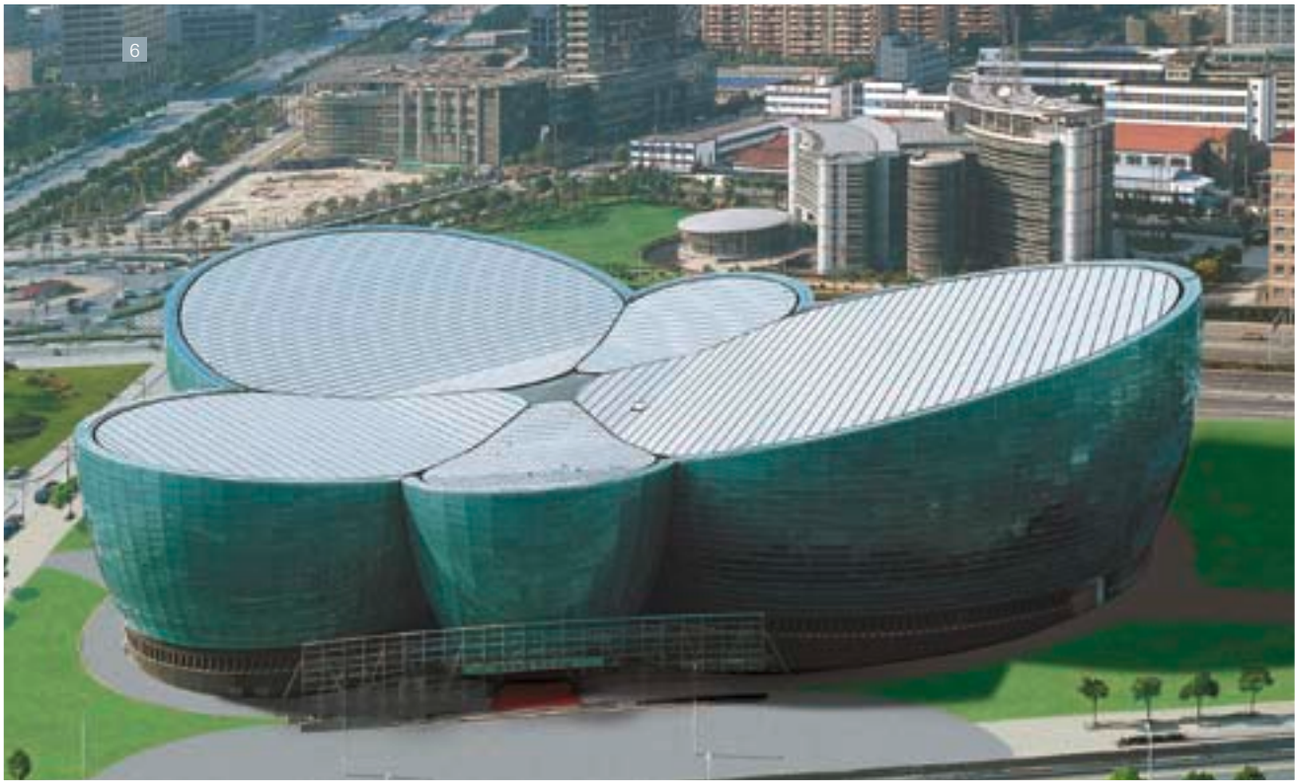
1 Benz Building,
Taipei, Taiwan

2 Opera Shanghai,
China

3 Information Centre,
Pudong, China

ALUCORE® applications – Architecture





4 SK-Building,
Seoul, Korea

5 Coop Shopping Centre,
Biberist, Switzerland

6 Shanghai Oriental Art Centre,
China

Projects in China

By the mid 1990s sales of ALUCOBOND® in China had risen to a volume equivalent to the capacity of the first production line in Singen, and during the explosive development of the Chinese building activities there were absolutely no signs of this growth undergoing any basic changes. As a result, the decision to set up a new ALUCOBOND® plant in Shanghai was made in 1996. A joint-venture partner was soon found, who was chosen above all for acquiring a suitable piece of land and settling the immense formalities.

Alcan Alucobond offices, Pudong

1 SenRong Plaza, Harbin

2 Communication Bank, Shanghai

3 Cultural Centre, Macau

4 ICBC Bank, Shenyang

5 Suzhou Stadium, Suzhou

6 German Centre, Shanghai

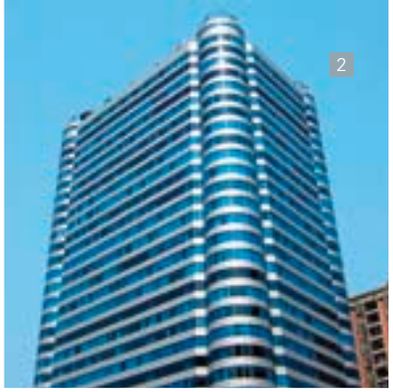
7 Radisson SAS Hotel, Beijing

1999

Alcan Alucobond factory

The absolute highest level of ALUCOBOND® sales in China with supplies from Singen and the USA was registered in 1997 and has not been reached again since. The financial crisis which literally hit Asia 'over night' late 1997 also had its effect in China as a result of a sharp decline in the exports to the region. The local market remained relatively stable and we decided to continue with our plan.

The factory in Pudong, Shanghai was inaugurated in spring of 1999 and has since been supplying ALUCOBOND® and DIBOND® to the local market and, to an increasing extent, also the Southeast Asian



1 Harbour Ring Centre, Shanghai

2 Wuyang New City, Guangzhou

3 National Accounting Institut, Shanghai

4 Theatre Building, Shenzhen

5 Central Apartments, Shanghai

Projects in China

and Pacific regions. Another step towards globalization had been taken. The joint-venture with the Chinese partner was terminated in 2002 and Alcan became the sole proprietor of the company.

In 2006 an already existing coil coating plant was acquired in Changzhou (approx. 200 km from Shanghai) and adapted to the technology and quality criteria required for our products.

4

5

1999

Shanghai ALUCOBOND®-Team 1999

1999 ALUCOBOND® Family Meeting Shanghai

1 China Science & Technology Institute Automation Tower, Beijing

2 Northeast Electrical & Power H.Q., Shenyang

3 Southern Airline offices, Guangzhou

4 Tonxiang Science & Technology Exhibition Center, Zhejiang Province

5 Marina Square Shopping Centre, Hongkong

6 Shenzhen Newspaper offices, Shenzhen

7 Shanghai Zizhu Digital Hub, Shanghai

1 Hyundai Deutschland, Rüsselsheim, Germany

2 Westin Hotel, New York, USA

ALUCOBOND® plus – Projects

In the interests of a continuous development and the improvement of existing products and processes, and in view of the increasing market requirements, the ALUCOBOND® research and development team had already set themselves the target of optimizing the properties and production process of ALUCOBOND® SB1 quite a long time ago. The outcome was ALUCOBOND® plus, the market introduction of which we experienced this year offering a better formability with the same fire classification.

ALUCOBOND® plus – Approval Certificate

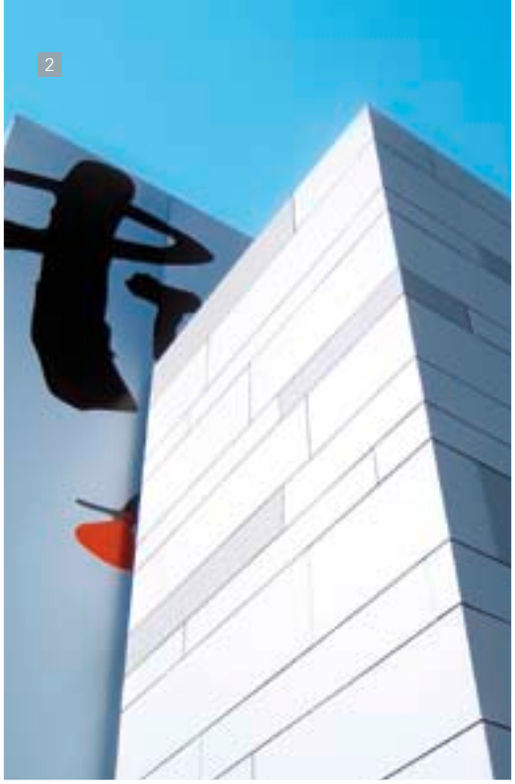
3 BMW Wind Channel,
Munich, Germany

4 Punggol West Power Station,
Singapore

2000

Ericsson offices,
Cyberjaya, Malaysia

Ministry of Finance,
Putrajaya, Malaysia



1 Televen H.Q.,
Caracas, Venezuela

2 Apumanque Shopping Centre,
Santiago, Chile

3 Salvador Shopping Centre,
Salvador, Brazil

Projects in South America

ALUCOBOND® sales to South America had also gained momentum over the last few years, and were steadily increasing. The markets were being served from USA where the capacity had now reached its limit. Due to the long transit times, shifting of orders to Singen was no practical alternative long-term. During that year it was therefore decided to set up a production line in Brazil, together with a joint-venture partner who was willing to provide the land. As luck would have it, a competitor's plant near Salvador that had only recently been put into operation, was on offer, including the entire infrastructure. Instead of setting up a completely new pro-

4 Blue Tree Tower, Brasilia, Brazil

5 Melo Barbosa, Recife, Brazil

6 Private Residence, Curitiba, Brazil

7 Water Ways Residences, Rio de Janeiro, Brazil

8 Otake Cultural Centre, Sao Paulo, Brazil

from 2002

duction site in another State, including buildings etc., this factory was taken over in October 2002 in the condition it was in, by the newly established joint-venture company. The adaptation of the production line and infrastructure to the ALUCOBOND® technology and Alcan standards followed and ALUCOBOND® production commenced mid 2003. This company is also completely in Alcan's hand today and manages the marketing and sales from the Alcan Brazil headquarters in Sao Paulo.

Projects in South America

Alcan Alucobond,
Camacari, Brazil

Official Opening Plaque


3


4


5

1 International Shopping Centre, Guarulhos, Brazil

2 Plaza Centenario (Robocop), Sao Paulo, Brazil

3 Unibanco Berrini, Sao Paulo, Brazil

4 Mall Plaza Oeste, Santiago, Chile

5 Higienopolis Boulevard Residences, Higienopolis, Brazil

6 Hotel Renaissance, Sao Paulo, Brazil

6

from 2002

Mid 2004 a new organisational structure of the Business Unit Alcan Composites came into force, setting up so-called PMUs (Product Market Units) which subsequently oriented and focused their activities and responsibilities more strongly on application-related rather than geographical markets. I was entrusted with the global responsibility for the 'PMU Architecture', which also included the responsibility for all ALUCOBOND® production sites, with the exception of that in USA. In 2008 the change to a regional PMU market organization was implemented.

In Singen the fourth line was completed in 2005 for the production of ALUCOBOND® and DIBOND®, designed for accommodating panel widths of up to 2 050 mm which have become increasingly significant, above all for particular display applications using DIBOND®.

During that year new, attractive surfaces for ALUCOBOND®, such as spectra colours and naturAl, were developed, and introduced on the market during the following years. They were to prove the versatility of ALUCOBOND®'s range of surface finishes.

Stefan Gisin

The ALUCOBOND® Value-added Sales Approach

by Stefan Gisin, Technical Sales and Marketing Manager, Alcan Alucobond (Far East) Pte Ltd., Singapore

Brighter, Bolder and Better – The Evolution of Corporate Identity in India's consumer petrol industry and the role of Alcan Alucobond (Far East) Pte Ltd.

The rise of the modern day pit stop

In the past, the humble retail petrol station was a sparse and simple facility that sold fuel and lubricants to motorists. With times changing and sophistication in the business of providing goods and services increasing, it has transformed into a pit stop offering many types of conveniences to weary travellers in addition to fuel – repairs, car washes, food, water etc. As such, the retail petrol station of today serves an integral and multidisciplinary quick stop for the urban world that is always on the move. The proliferation of these stations spread exponentially hand in hand with the industrial boom of the 21st century. In recent years, as Asia flourished, the number of retail petrol stations also increased. In India alone, there are more than 10 brand retailers with a combined total of more than 40 000 retail outlets.

A rising need for corporate distinction

In Europe, retail petrol stations often are well signed, clean, well lit and representing an attractively designed space. Asia was slower to pick up on the concept of nurturing a corporate design, especially in countries like India, where many of the retail petrol stations are state owned and issues like façade and signage were often neglected. However, with deregulation threatening to dethrone state owned petrol retail companies from upcoming private operators and foreign companies entering India, it became clear that a major upgrading was necessary. The retail petrol stations were starting to wise up to the idea of a stronger visual presence and brand iden-

The sales and marketing of ALUCOBOND® in the architectural sector had already been initiated on the Indian sub-continent in the mid-90s by the team in Singapore with the support of local market partners, and in the course of the years it was rewarded with interesting façade projects.

The sale of the product took a quantum leap with the beginning of a series of CID programmes of the leading Indian petrol station owners at the turn of the millennium. The fact that these programmes brought ALUCOBOND® such excellent success is due to the exemplary commitment of both the sales staff and the application engineers in the Singapore team.

tity. But while there were sign makers and designers already established in the country, no one really had an integrated experience to execute the unique requirements needed to dress up an Indian service station.

The learning process made easier with guidance

By around the mid-nineties, Alcan Alucobond Far East was already attempting to address this specific lack of expertise in the Indian market via a role as a three-way consultant with petrol retail owners, sign makers and designers. Our role was integral in helping to synergize the work processes involved in giving the petrol station a facelift.

The process of integrating corporate identity into the Indian petrol retail business was not without its difficulties. The over-arching philosophy of good, durable and cheap made many owners hesitant to make the initial investment of hiring a credible corporate identity agency. ALUCOBOND® would have to persuade the market leaders to take the plunge and lead the way. In order to do so, the factors that weighed most had to be satisfied, such as durability and resistance to traffic pollution, easy maintenance and repair as well as value for money. The most pressing need would be for corporate identity work to marry all the visual components of a station – from the canopy fascia, monolith or high mast signs, directional signs, spreader signs on petrol pumps, utility signs, outlook of the convenience stores, cafes and other services offered under the umbrella of the station – seamlessly into a clear and fresh identity.

2006 – 2007

The commitment to these CID programmes and also the steadily increasing number of projects being realized in the façade area gave rise to the increasing acceptance of aluminium composite panels on the Indian market, and led to one of our long-standing local sales partners parting from us to set up his own panel production. For a few years we were acting on the market as competitors until our former supporter realized that the ALUCOBOND® brand had meanwhile established itself so firmly in India that a parallel market strategy would not bring him the long-term success he had planned for. He had also discovered that we were

Hindustan Petroleum, before

Hindustan Petroleum, after

In India, an introduction of better materials provoked a quick transition from both stiff and rigid acrylic as well as flexible vinyl to the highly versatile aluminium composite material (ACM).

Market leaders took the plunge to become trendsetters

By the start of the new century, Arjen Flierman, our marketing and sales manager convincingly persuaded Hindustan Petroleum Companies (HPCL) to redesign their corporate identity. We introduced a foreign design consultant, Execon Australia, to whom both Julian Pok, our technical manager, and I provided assistance to redesign the HPCL retail petrol stations. Prototype work by the ALUCOBOND® trained Indian sign making company Sign Design started in 2002, with the final design approved soon thereafter. In August the same year, a tender for 140 stations was initiated. A total of 3 000 stations were soon signed up to demonstrate the new look, with us managing the 7-year project with the target to revamp 300 – 400 stations annually.

In 2003, after several meetings with Indian Oil Corporation Limited (IOCL), we elected the local design consultant Fountainhead to design the transformation of the IOCL outlets. Technical support was given by us and the outcome was IOCL inking a contract to upgrade at least 60 % of its 7 600 stations.

Following the HPCL and IOCL successes, we embarked on converting the Bharat Petroleum Corporation Limited (BPCL) outdated

Bharat Petroleum, before

Bharat Petroleum, after

Bharat Petroleum, after

retail petrol stations, following a similar strategy. The Industrial Design Centre (IDC) in Mumbai presented their unique design concept to the owner. We closely assisted IDC in the design process through imparting the nuances of fabrication knowledge, prototype production, the preparation of specifications and drawings, as well as offering training for all parties involved – a proper work integration and process was ensured for BPCL.

We were also present in the planning and execution of the project rollout and implementation. In its role with the sign makers, ALUCOBOND® had to provide proper equipment, train as well as supervise up to the final stages.

The same strategy was applied for other petrol retail companies like NRL and Reliance with much success.

A win-win situation for everyone

Providing an allround support, the right material for the right application produced a very positive outcome – many retail petrol stations in India received the best makeover possible to give them a decisive edge over their competitors. The benefits were manifold

Indian Oil,
before

Indian Oil,
after

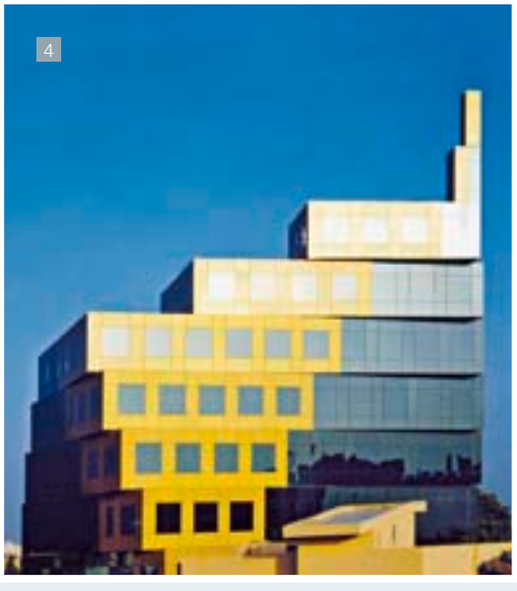
for all involved. Through ALUCOBOND®, the owners were able to take advantage of the right resources and achieve their desired goals. With our help, the sign makers were able to gain valuable experience, thus creating a new revenue channel for themselves. Conversely, ALUCOBOND® was able to establish an extensive network and forge strong work relationships with sign makers. Also with a hand in the process of creating prototypes, we were able to realise the design agencies' blueprint inspirations. With ALUCOBOND® supplying the right material, fresh and distinctive designs were finally attained. It was noted that many sign makers and designers endorsed the brand ALUCOBOND® and outwardly aligned themselves with our ALUCOBOND® team to gain credibility in this line of work. As such, it can be clearly seen that Alcan Alucobond Far East has indirectly increased its brand equity and further established itself as a trusted name in composite materials and their applications in Asia.

1 Berjaya House, Delhi

2 Krisp IT-Park, Chennai

3 Capital Court, Gurgaon

4 The Ascent, Gurgaon



Alcan Alucobond, Khopoli

considering setting up an ALUCOBOND® production site in India ourselves. Consequently we finally joined forces again. Alcan purchased his production plant, including the infrastructure and we mutually founded a joint-venture, with Alcan having a majority holding. As practised in Brazil the existing plant was adapted to

5 Signature Towers, Gurgaon

6 Apollo Tyres, Gurgaon

7 IFFCO Corp. offices, Gurgaon

8 Muttha Tower, Pune

Projects in India

2006 – 2007

the ALUCOBOND® technology and its environment to the Alcan infrastructure standards. Since mid-2007 ALUCOBOND® is being produced in the Khopoli factory near Mumbai and sold on the Indian market through its own sales organization. The coated coils are mainly purchased from Alcan Composites in China. The final step in ALUCOBOND®'s globalization, for the time being, had now been taken.

1 Crossroads Shopping Centre, Mumbai

2 City Bank, Mumbai

3 DLF Silokhera, Gurgaon

4 Bharat Diamant Bourse, Mumbai

5 DLF Atria, Gurgaon

6 DLF Corporate Park, Gurgaon

7 Delhi Metro, Delhi

8 Infinity 1, Kolkata

9 National Stock Exchange, Mumbai

10 Crompton Greaves

11 DLF Ericsson, Gurgaon

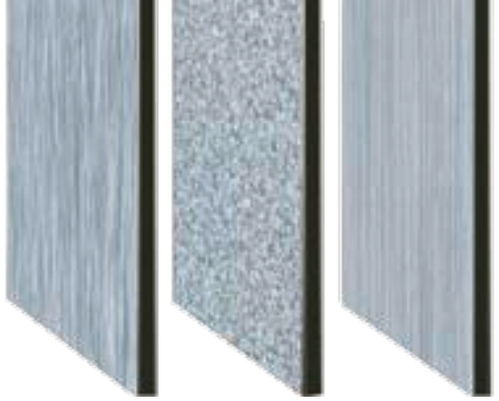
Projects in India

Visualplex, Bucine, Italy

ALUCOBOND® spectra colours

In order to keep pace with the trend in architecture towards natural surfaces, which has already been noticed for some time, the development of new ALUCOBOND® surfaces had already been started in 2005. A market survey on the acceptance of the new lacquered finishes and different surface structures was then conducted. The result of this market analysis played a decisive role in the introduction of the ALUCOBOND® spectra colour range and the ALUCOBOND® naturAL surface series which enabled ALUCOBOND® to initiate new trends in design and satisfy the notions of leading architects.

The opalescent, iridescent colours that appear in nature served as a model for the ALUCOBOND® spectra colours which were developed in collaboration with world leaders in production of lacquers and pigments. Depending on the type of pigment and the view angle, different wave-lengths of light are reflected back to the viewer, thereby producing changing colour gradient effects with an opalescent glitter.



Centre de Formation Bull,
Massy, France

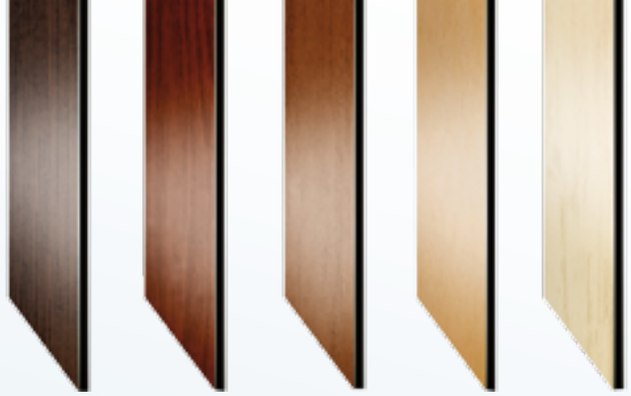
Architect: Axel Schoenert –
Cabinet d'Architecture ASAA

La Cigale Hotel, Doha, Qatar

ALUCOBOND® naturAL

2008

The natural beauty of metal in architecture is shown off to its best advantage by the panel surface series naturAL. When seen from up close, ALUCOBOND® naturAL appears extremely fascinating due to its fine surface structures. From a distance, the interplay of metallic gloss, reflection and absorption is most impressive. Combinations of different surface structures create highly unusual results with a diversity of attractive effects – depending on how the light shines on them.



ALUCOBOND® Wood Design

ALUCOBOND® photovoltaic

ALUCOBOND® Wood Design, photovoltaic und media

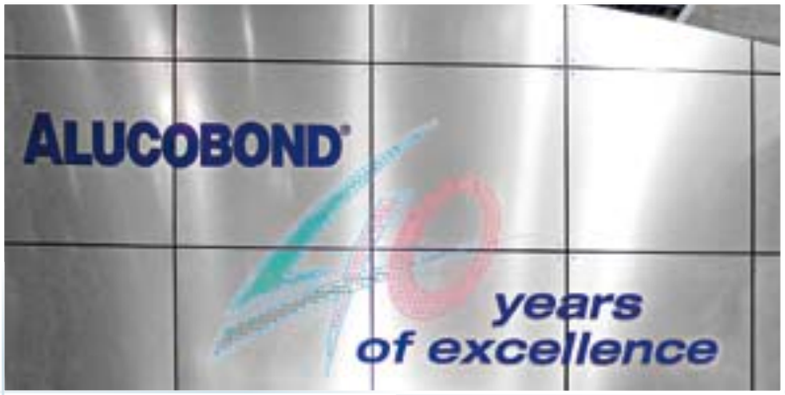
The Anniversary Year began for ALUCOBOND® with its recent presence at the BAU in Munich, the most important trade fair in Europe for architecture, materials and systems. The design of the exhibition stand was completely geared to the 40th Anniversary, whereby the new innovations, such as ALUCOBOND® photovoltaic, ALUCOBOND® media and the new surface series ALUCOBOND® Wood Design, took centre stage and aroused great interest amongst the expert visitors.

The surface series, ALUCOBOND® Wood Design, follows the trend towards more naturalness, ease and comfort, and unpretentious elegance in architecture. In comparison with genuine wood, there is no risk of discolouration and weathering with ALUCOBOND®. Therefore, to realize technically sophisticated solutions is no problem.

ALUCOBOND® media is the result of combining high-grade technologies by integrating a complete LED lighting system in the ALUCOBOND® panels. The use of light, colours and animated pic-

Exhibition stand BAU 2009,
Munich

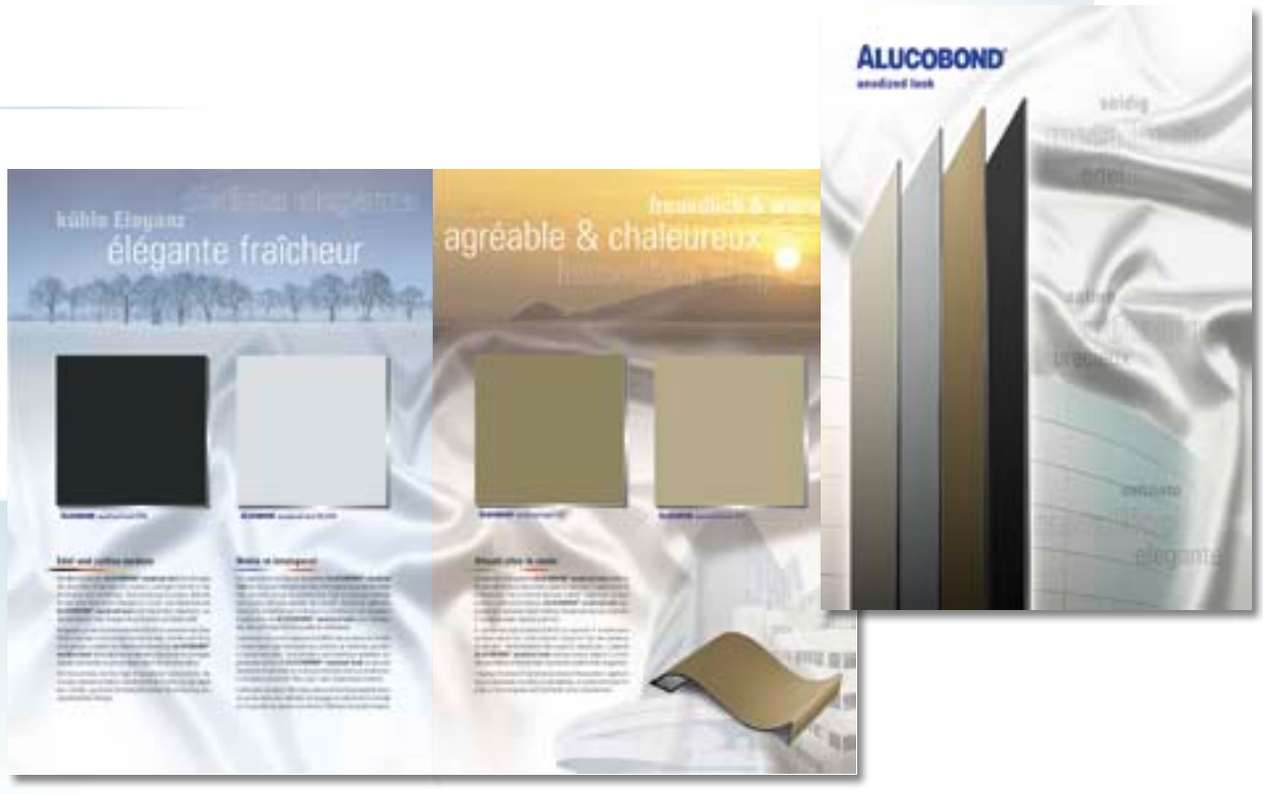
ALUCOBOND® media



2009 – the Anniversary Year

tures on façades offers architects and designers completely new possibilities and lends the buildings an additional architectonic flair. The interplay of rigid architecture and visual concepts fascinates and makes such buildings stand out distinctively in the picture of a city. In comparison with the usual lighting systems, the energy consumption of the LEDs used is very low.

Already today, ALUCOBOND® photovoltaic meets the future requirements for energy-efficient buildings. The ALUCOBOND® photovoltaic system integrated in a façade combines functionality and aesthetics. In combination with the proven properties of ALUCOBOND®, clean energy is produced with the photovoltaic elements, made in Germany, that are integrated in a façade.



ALUCOBOND® anodized look

Another new development is waiting to be marketed during the later course of the Anniversary Year: ALUCOBOND® anodized look. These four new surface finishes bring out the effect of the matt, velvet-like metal used in architecture – a noble, modern enhancement. Adjusted to the EURAS industry standard, the surfaces harmonize in an optimum way with other anodized construction parts. In contrast to anodized materials, ALUCOBOND® anodized look can be folded and bent without any problem and guarantees a non-compromising implementation of the original design.

Customer requirements and the growing demands on environmental compatibility and sustainability were always the focal points of the ALUCOBOND® development projects. This has been affirmed in a very special way by both the prizes that ALUCOBOND® has recently been awarded.

Residential buildings,
Dortmund, Germany

Police Station,
Chemnitz, Germany

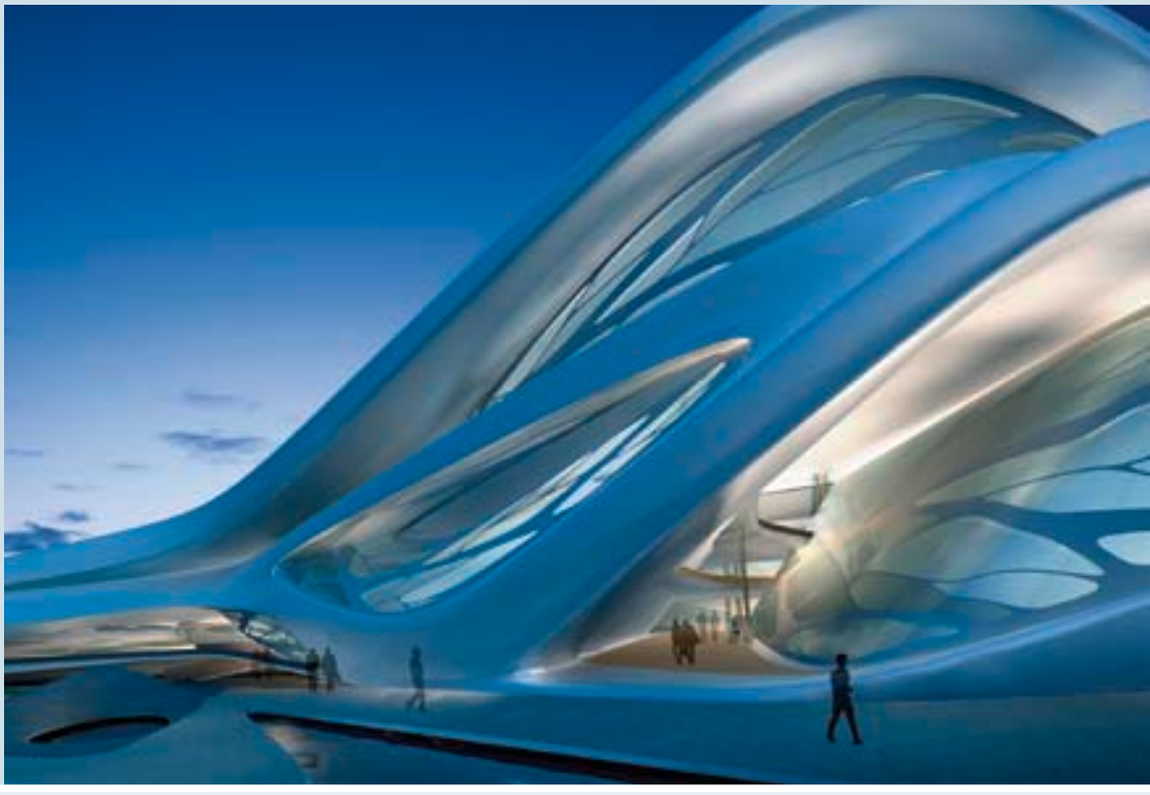
Awards

2009 – the Anniversary Year

In June 2008 ALUCOBOND® received the 'BEX Award' in Valencia, Spain in the category, 'Best Use of Architectural or Structural Design' for its application in the modernization of 5432 residential units in the Dortmund suburb of Scharnhorst, Germany. The jury especially highlighted its impression of an urbanistic, sustainable concept which asserted itself against international projects.

At the beginning of the year, the Façade Prize, FVHF 2009, was awarded to ALUCOBOND® for the rear-ventilated façade of the Police Station in Chemnitz, which was clad with storey-high panels, thereby enhancing the new image of the police with its silver colour police cars. The responsible manner of handling the original building, by maintaining the given structure of the outer shell, as well as the strict consistency in making the new metal façade cover all parts of the building, particularly impressed the jury.

A Glance at the



Abu Dhabi Performing
Arts Centre

Architekt: Zaha Hadid

Future

Robert Onion

40 Years of ALUCOBOND® – What does the future hold?

by Robert Onion, Chairman Circle, London

Robert is a founder member of London-based Circle, a leading brand and design consultancy specialising in branded environments. He is recognised as a leading expert in branding in the built environment. Clients include Mercedes-Benz, BP, Emarat and Lord's MCC.

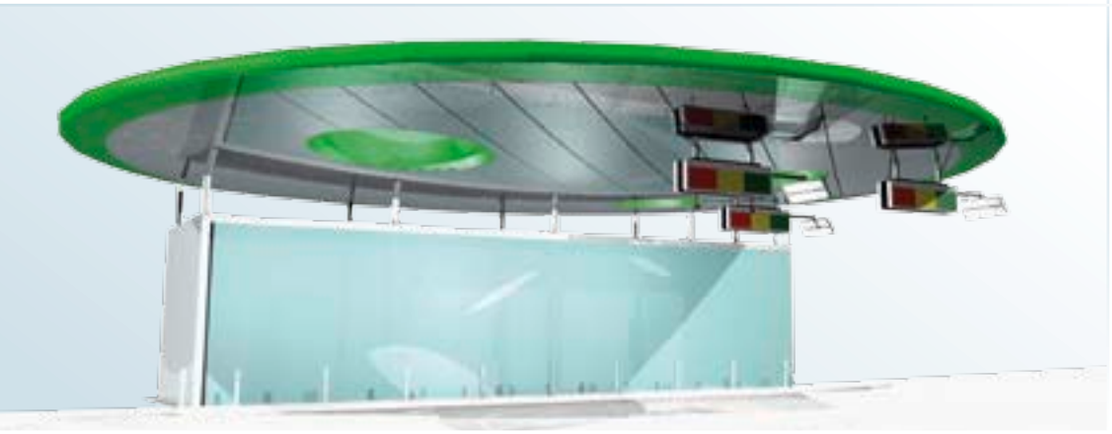
Cities as brands: Building the future

The power of branding has been well recognised by manufacturers and advertisers since the spawning of the American railways and mass produced consumer goods at the start of the 20th Century. When products such as medical remedies were sent to remote settlements makers endorsed their tinctures with claims of quality. 100 years later we are surrounded by brands and bombarded by messages from their owners.

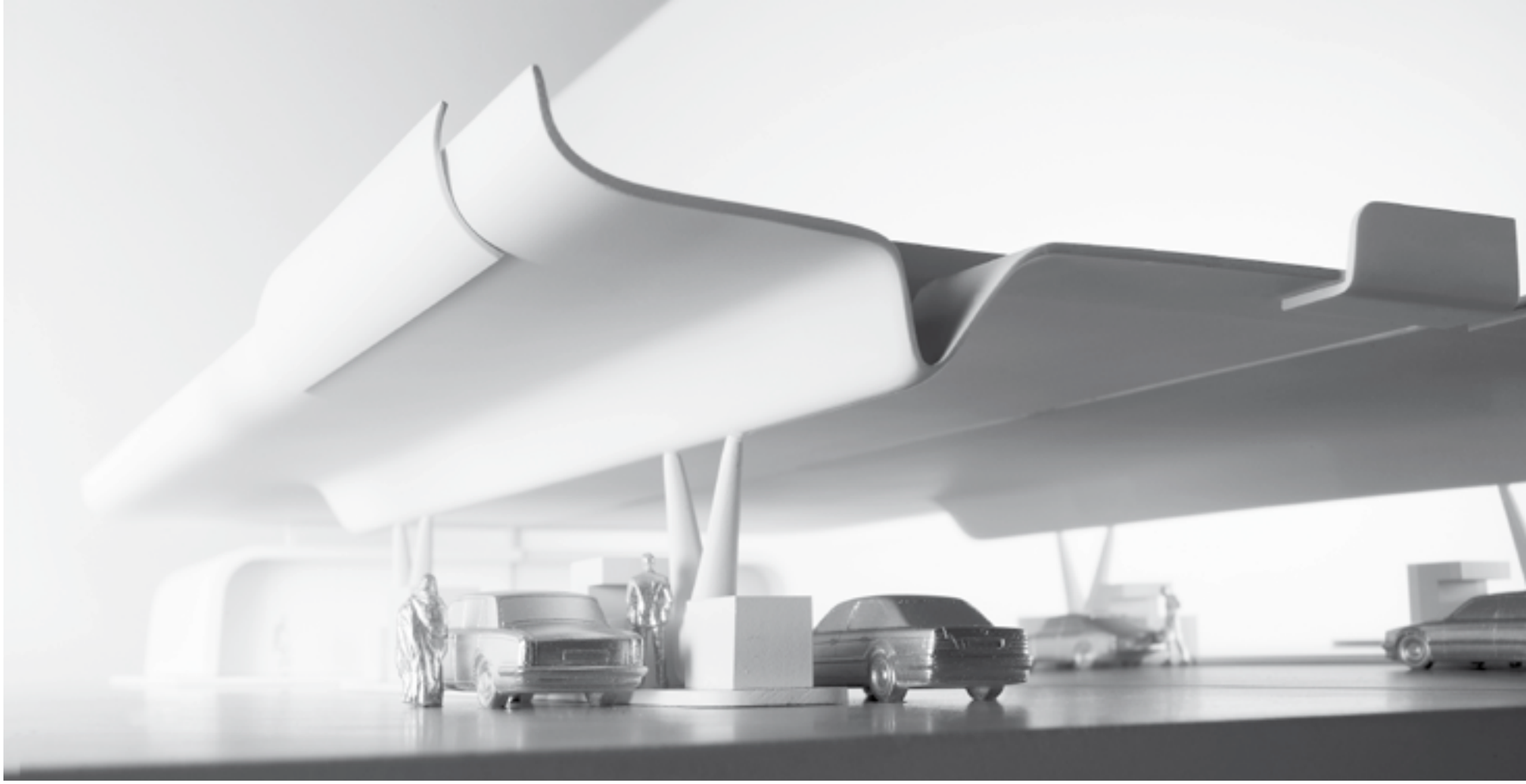
There is no more powerful expression of a brand than in the built environment. Our senses are engaged as we interact at an emotional level; think of children enjoying a Disney rollercoaster ride or running in the 100 m Olympic final.

Even countries that 20 years ago had not heard of brands are now putting themselves on the map and creating brands overnight. Places where there was no internal or external market are now becoming global players, exporting their ideas and cultures internationally.

New cities are emerging along the Persian Gulf with identities previously unimagined. A blank canvass of sand and sea provide oil rich nations the opportunity to create visions for modern living (like Singapore and China in the 1980s and 90s) Dubai, Qatar, Abu



Concept: Oula Kuwait



Concept: Saudi Fuel

Dhabi are all in the process of creating world-class destinations with cities to rival and often exceed the world's best.

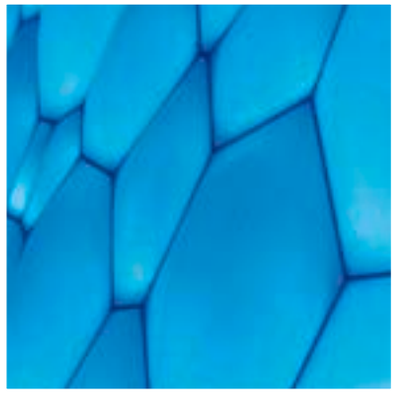
Material perspectives

Icon building has always been an essential part of successful environmental branding and as distinctive as the structures are the materials that they are made from. The Roman Empire and masonry or the early 20th Century development of the London Underground by architect Charles Holden, combining brick and glass in a poetic but practical way.

Using materials to create brands is central to our work at Circle. Materials that communicate brand through colour and illumination are important but local availability and access to the relevant construction techniques is critical. ALUCOBOND® fits these criteria and has been specified for many of our projects including two shown below.

Olympics Water Cube,

Architects: PWT



Olympics Water Cube,

Architects: PWT

Materials of the future

Zaha Hadid and Frank Gehry are re-defining what is possible in the built environment, but for many years their projects existed only as drawings. However, as computer and materials technology has developed these buildings are finally buildable. Any up and coming city looking to establish a reputation for arts that does not have a Gehry or Hadid creation is not on the cultural map. The Water Cube

Abu Dhabi Performing Arts Centre
North view

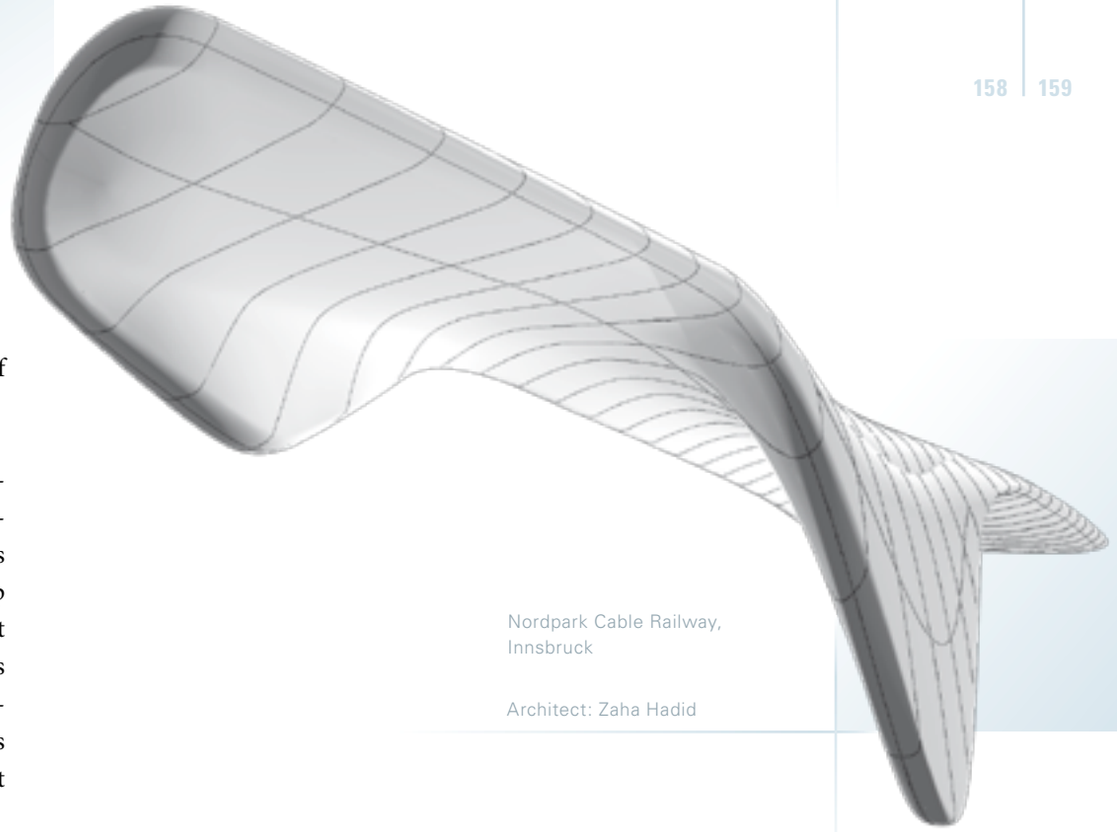
Architect: Zaha Hadid

designed by Australian architect PTW is also a striking example of new materials expressing a buildings function.

Hadid's creations resemble muscle structures more than the rectilinear building forms that result from traditional building materials. These iconic creations will set the trend and lead designers and architects to demand more and more from materials that wrap their structures. Designers do not want to be constrained by what materials cannot do, they want materials that are able to express their most exciting visions. They want the freedom to design buildings like chameleons that can change colour and shape or buildings with an external skin that can illuminate and transform overnight to project new graphic ideas or change colour with the season.

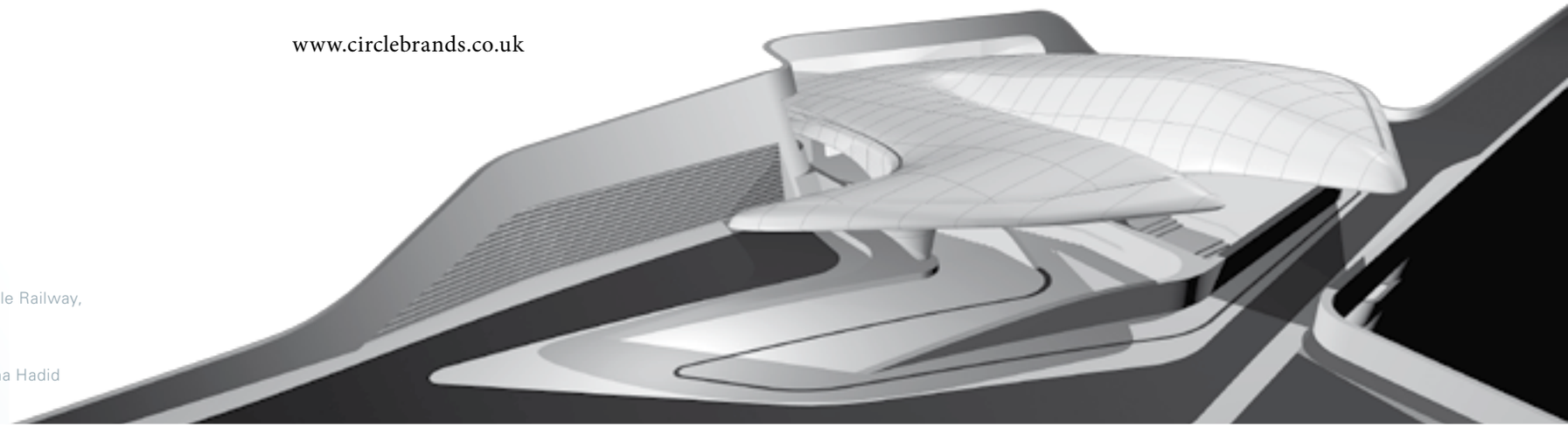
As new cities are dreamt of and our perceptions change of what is possible materials will evolve to respond to the designers needs, and I have no doubt that Alcan will be at the forefront of helping us live our dreams.

www.circlebrands.co.uk



Nordpark Cable Railway,
Innsbruck

Architect: Zaha Hadid



Nordpark Cable Railway,
Innsbruck

Architect: Zaha Hadid

Markus Gross

ALUCOBOND® – Quo Vadis?

by Markus Gross, President, PMU (Product Market Unit) Architecture Europe, Alcan Composites

Our Legacy

An accidentally acquired piece of information and the resolute quest for innovation led to combining aluminium sheets and polyethylene in the 1960s, thereby creating a new product offering customers advantages over solid aluminum sheets. Colleagues from this era in company history have related that only some members of the concern truly believed in the success of ALUCOBOND® composite materials.

It was the commitment of employees at all levels of the company and of the respected Alusuisse that opened the way to develop a leading product, one that would become as renowned as Styropor® insulation and fiber cement slabs.

Our contemporary workforce is confronted with a number of challenges: to continue the tradition for many years into the future with ever-renewed commitment, to implement changes in strategy, to maintain a steady course during times of economic recession, as well as to keep up with innovations in the building technology.

ALUCOBOND® – the Brand

The path from a product idea to a brand name of worldwide renown can be likened to a mosaic of successes, of setbacks, as well as of commitment to the customer to overcome obstacles and to make further progress. The quality of a brand can only be measured in terms of the degree of respect and acceptance its products are accorded by the consumer public.

Thanks to 40 years of diligent effort put forth by enthusiastic colleagues, ALUCOBOND® enjoys a reputation that has made its name the synonym for aluminum composites used for a variety of applications. A product with such a powerful brand recognition as that of ALUCOBOND® requires the highest level of attention in matters of innovation and brand management.

For 40 years a close and continuing relationship with our customers has been our primary concern in every market we have been involved. As a result, ALUCOBOND® is a name that has currency for building owners, investors, architects, designers, façade and cladding contractors, and entrepreneurs around the globe. The name ALUCOBOND® has become inextricably linked to ideas of Swiss-German quality, reliable delivery, and worldwide presence. ALUCOBOND® is a unique brand that stands for innovative products and sensitivity to the needs of the marketplace.

In order to become a market leader many years of experience have been necessary. Essential ingredients are a detailed knowledge of specialized areas and employees who are deeply committed to their

Vehipole Automobile
Research Centre,
Ploufragan, France

work regardless of position or area of expertise. On our successful path into the future we will continue nurturing and investing in all of those factors, to ensure ALUCOBOND will remain the leading brand in the field.

The Path into the Future – Our Mission

We will continue to conduct our business according to the highest standards of professionalism. Our customers and business partners can continue to expect ALUCOBOND® products of the highest quality with unique features. Building owners, investors, architects, designers, façade and cladding contractors, and entrepreneurs – all will find that we remain the reliable partner in their business family. We will be vigilant in seeking opportunities for improvement, in keeping watch for new developments in the areas of sustainability, building safety, and fire protection.

We will work closely with our fabricators and façade and cladding contractors in regard to fabrication techniques and fixing methods. Moreover, our ongoing dialogue with designers and architects will ensure that changing demands are satisfied. Building owners and investors will continually find themselves supported with products that offer both clear advantages and durability.

To us a global market means the sum of individual markets, each with its individual conceptions and specific needs. It is our goal to better serve by increasing our understanding of a complex world of individual national markets. Consequently we will continue working closely with our individual customers on their local markets throughout the world.

Our customer is the investor who has his own views regarding the design and durabilty of his buildings.

Our customer is the architect and the decision maker, the one who is seeking valuable façade and cladding products as well as reliable advice in regard to design and technical details.

Our future is one that will bring us even closer to clients throughout the world, whether in Europe, the Middle East, Russia / CIS, North and South America, Africa, China, the Pacific Rim, or Australia.

Our Credo

We are a family but consist of individuals, each with their individual conceptions but all with the same wish: to create sustainable, unique, and impressive buildings with ALUCOBOND.

Georg Reif

Daring a Glance at the Future

by Georg Reif, President, Alcan Composites, Sins, Switzerland

Whoever was successful yesterday must do his level best today to understand the world of tomorrow. An entrepreneurial way of thinking compels us to keep abreast of constant change in our environment and initiate the necessary strategic changes at an early stage.

At the same time we are fully aware that the globalization which hit the world economy like a storm at the end of the second millennium has meanwhile in fact already 'taken place'. It has become an everyday reality for us all. And we should not ignore the fact either, that due to the informatization many processes which determine our lives and our work, take place at a breath-taking rate. Information and money circulate the globe faster than any goods – the consequences sometimes being hard to foresee, like the developments on the international financial markets we had to experience bitterly at the end of last year.

Also the pressure exerted on politics, industry and the economy to practice a sustainable handling of the available resources and to protect the environment, is continually increasing. Whereas Europe has already made significant progress in this area, the understanding for sustainable economic management is now also growing in the USA. In other regions, i.e. in densely populated countries with a strong economic growth such as India and China, there is a tremendous need to catch up.

As a logical consequence, excellent opportunities emerge for suppliers of innovative products and solutions. As an experienced manufacturer of composite materials, in this context Alcan Composites can base on its firmly established quality products on a global scale such as ALUCOBOND®, and on valuable core competencies. However, we need to make use of our know-how and the multifaceted skills of our personnel – of many nationalities! – in order to serve markets and application areas with their regionally specific demands in an optimum way. Here I have in mind the architectural sector, and the construction of industrial and residential buildings. In order to gain competitive advantages on the markets of the future, for example for solar surfaces, for optimizing fire-behaviour properties or for recycling of materials, we not only continually need new ideas, but also new talents.

With the expansion of our regional PMU (Product Market Unit) market organization in 2008 we geared our focus even more closely on the development capacity and the market cultivation of our

units Architecture, Display and Core Materials. The continuation of our close cooperation with customers and suppliers is absolutely vital for guaranteeing the high level of competence – also in future.

Building up on our strengths in the sector of light-weight construction applications, in the area of multimaterial solutions and their appertaining manufacturing processes, and with our interactive network of production plants across the continents we intend to proceed along the path of continuing innovation, though being well aware that we are often operating in saturated markets and that our innovations are quickly copied by the competition.

With im@c® – Innovation Management at Composites, introduced in 2007, we have a modern instrument, sustainably characterizing the culture of the company, for developing, controlling and implementing innovations in a targeted way. Not only our own personnel in Sales and Marketing and in Research and Development are integrated here, but also our business partners, i.e. customers, suppliers and scientists. This is because innovative companies are characterized by their successful knowledge management; they recognize relevant trends in society and on the markets at an early stage, and they create values not only for their own personnel, but also for their business partners along the entire supply chain, and for end customers and investors.

Systematic innovation management is an important integral part of Alcan Composites' strategy. It requires selected and highly motivated personnel and partners, all trained and educated accordingly. Thus, within the scope of the Alcan Engineered Products' Innovation Cells, we expect valuable stimulation and recommendations from the cooperation recently initiated with the Department for Architecture at the Eidgenössische Technische Hochschule, Lausanne (EPFL) and other scientific institutes. Another prerequisite for successful innovation management is the exchange of information between all involved. We shall, therefore, also have to invest consistently in efficient communication.

Constantly widening our horizon in order to meet the continually growing demands of our environment is always our goal. Only if an organization is open for something new and utilizes all the means at its disposal for creating innovations, it will manage to reach leading positions on the markets of the future. We are convinced that we are well prepared for the next 40 years.

Closing words

Since its first market introduction 40 years ago ALUCOBOND® has significantly influenced the appearance of many buildings. During these four decades a constant development in architecture has taken place; new materials have enabled architects to extend the limits of the achievable to an extent that would have been unimaginable before. ALUCOBOND® has most certainly contributed towards this development and today it is a prominent feature in a large number of attractive, distinctive architectural projects, world-wide.

Nevertheless, development is continually progressing and the creative visions of successful architects and designers are demanding original, functional and innovative construction materials more than ever before, as the buildings of the future will not only have to fulfill the highest structural demands, they will also have to meet the technical and ecological requirements of the future. Handling nature and its resources with care and foresight, avoiding environmental pollution, observing energy efficiency, protection against noise and fire, and ensuring sustainability are just some of the challenges of our time.

In this respect, Alcan Composites has also been following stringent directives and targets for many years, that stipulate a systematic, continuous reduction in the use of raw materials, energy and water, and the avoidance of waste. Environmental audits as defined by DIN EN ISO 14001 (Environment Management Systems) and OHSAS DIN ISO 18001 (Industrial Safety Management Systems) are standard today.

Alcan Composites will also be focusing on innovations to an increasing extent in the future; it will continue to develop ALUCOBOND®, thus offering the world of architecture new possibilities for application. New surfaces, core materials and system solutions will be increasing the versatility, quality and functionality of ALUCOBOND® even further. With our globally oriented production and development, and networking with our partners throughout the world, we want to be one step ahead of our competitors with ALUCOBOND® in the future, too. The product began as a pioneer and became a synonym and long may this continue to be the case!

We hope you enjoyed reading this ALUCOBOND® anniversary book and that we could give you some interesting insight into the history of its ‘product family’. We would like to thank all those having provided valuable input and contributed to realizing this book, in particular the many Alcan external and internal authors of most interesting and informative articles.

For and on behalf of the editorial team
Claus Leyting

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