STAINLESS INDIA

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Indian Stainless Steel

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The inaugural session (seated left to reight): Ms Lynette Northey, Program and Events Director, CRU EVENTS; Mr Ramesh Gopal, Executive Director, ISSDA; Mr N C Mathur, President, ISSDA; Dr Mano Ranjan, Secretary, Ministry of Steel; Mr Prithviraj Chavan, Minister of State in the Prime Minister's Office: Mr Ratan Jindal, Vice Chairman and Managing Director, Jindal Stainless Ltd: Mr Nirai Baiai, Past President, ISSDA: Mr Robert Perlman, Chairman, CRU GROUP. At the podium is the Master of Ceremonies, Mr Y P S Suri, CEO, SteelRX Corporation Pvt Ltd.

The 8th International Stainless Steel Conference (Nov. 6-8, 2005, New Delhi) organized by CRU EVENTS in association with ISSDA and supported by Jindal Stainless Ltd cast a magic spell among the audience. The 370 registered delegates comprised of a galaxy of stars from the international stainless steel community and India. The distinguished speakers shared their thoughts and stimulated some lively discussions. The social occasions gave every one the opportunity to catch up with old friends and also make new ones.

Mr Prithviraj Chavan, Minister of State in the Prime Minister's Office, Dr Mano Ranjan, Secretary, Ministry of Steel, Mr Ratan Jindal, Vice Chairman & Managing Director, Jindal Stainless Ltd, Mr N C Mathur, President, ISSDA and Mr Robert Perlman, Chairman, CRU Group were among those who spoke during the inaugural session.

This is for the first time that CRU held their stainless steel conference outside Europe. All participants, especially those from overseas carried back lasting memories of the powerful speeches and the social events.

ISSDA and CRU EVENTS convey their sincere thanks to all sponsoring organizations.



Mr N C Mathur and Ms Lynette Northey who were responsible for bringing this event to India.



Mr Ratan Jindal (right) presenting a bouquet to Mr Prithviraj Chavan.



Mr N C Mathur (left) presenting a bouquet to Dr Mano Ranjan.



Mr Robert Perlman



Dr Mano Ranjan (left) presenting a memento to Mr Hanish Malhotra, son of Mr Ashok Malhotra, Past President, ISSDA.



Mr Prithviraj Chavan (left) presenting a memento to Mr Niraj Bajaj, Past President, ISSDA.



A view of the audience.

November 7, 2005

WELCOME BY THE CHAIRMAN Peter Kaumanns, ISSF

KEYNOTE ADDRESS – TRENDS AND CHALLENGES FOR STAINLESS STEEL Pekka Erkkilä, Outokumpu Oyj

GLOBAL OUTLOOK FOR STAINLESS STEEL FLAT PRODUCTS – A MARKET IN TRANSITION Vanessa Davidson, CRU Analysis



Mr Peter Kaumanns



Mr Pekka Erkkilä



Ms Vanessa Davidson



Mr Oliver Damm



Mr Gautam Varma



Dr Salvatore Pinizzotto

STAINLESS STEEL USE IN SOUTHERN AFRICA Dr Oliver F.R.A. Damm, SASSDA

CHINESE STAINLESS STEEL MARKET Gautam Varma, BHP Billiton

THE ITALIAN MARKET – LEADING SECTORS FOR FURTHER GROWTH IN STAINLESS STEEL USAGE

Dr Salvatore Pinizzotto, Xida Market Research

DEVELOPMENT EFFORTS IN SAIL FOR STAINLESS STEEL PRODUCTS WITH STRINGENT REQUIREMENTS Dr Santanu Ray, Steel Authority of India Limited, RDCIS

INDIAN MARKET – EVOLUTION & PROSPECTS
Mrinmoy Roy, Steel Authority of India Limited, Salem Steel
Plant

CHARACTERISTICS & APPLICATIONS OF CHROME-MANGANESE STAINLESS STEELS Dr LK Singhal, Jindal Stainless Ltd



Dr Santanu Ray



Mr Mrinmoy Roy



Dr L K Singhal



Mr S S Virdi



Mr Al Goodman



Mr Pascal Payet-Gaspard

SERVICING A STAINLESS FUTURE S S Virdi, Jindal Stainless Steelway Ltd

GLOBAL STAINLESS STEEL RECYCLING AI Goodman, ELG Haniel Group

November 8, 2005 Chairman: N C Mathur, JSL KEYNOTE ADDRESS – NEW MARKETS Pascal Payet-Gaspard, Arcelor Stainless International

November 8, 2005 continued

STAINLESS STEEL – A MANUFACTURER'S PERSPECTIVE Beat Waldmeier, Franke Group

CONCEPT DEVELOPMENT & WHAT AUTOMOTIVE INDUSTRIES CAN DO TO STEER TOWARDS SUCCESS

Roland Gustafsson, Volvo Technology Corp

PROSPECTS FOR GROWTH OF STAINLESS STEEL IN INDIAN METROS

Y K Gururaja, Bharat Earth Movers Ltd



Mr Beat Waldmeier



Mr Roland Gustafsson



Mr Y K Gururaja



Mr Gaetano Ronchi

STAINLESS STEEL

AN OUTLOOK ON FERROCHROME

MANAGING NICKEL PRICE RISK IN

Philip Tomlinson, CRU Strategies

Abdumalik Mirakhmedov, ENRFerroalloys THE NICKEL SUPPLY CHALLENGE Marja Kirves, Falconbridge Ltd

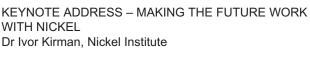


Mr Joaquim Boixareu





Dr Ivor Kirman



HOUSE WARES: DRIVERS FOR THE APPLICATION

EVOLUTION IN EUROPEAN DISTRIBUTION: BACK TO



Mr A Mirakhmedov



OF STAINLESS STEEL

BASICS

Gaetano Ronchi, IKEA Trading SA

Joaquim Boixareu, Irestal Group

Ms Marija Kirves



Mr Philip Tomlinson

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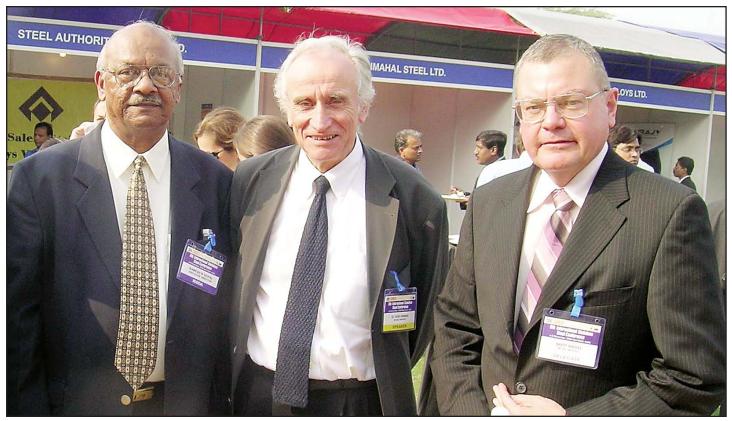




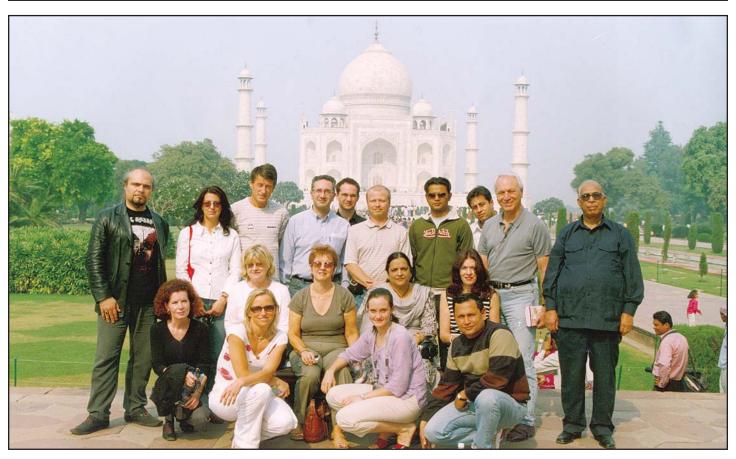




The group that visited the JSL plant at Hissar.



The Nickel Institute (formerly NiDI) was the inspiration behind the formation of ISSDA. NI has continued to provide strong technical and manpower support to ISSDA since 1988. Above, from left to right are, Ramesh Gopal, NI's General Manager and Executive Director of ISSDA; Dr. Ivor Kirman, President, NI, who presented a paper at the conference; Mr. Barry Waters, NI's Group Director, Nickel Use Support and Development.



The group that visited the Taj.

Effective solution to bird menace

Bird droppings indeed create a mess and have known to be disastrous to newly painted buildings. A nightmare for builders, architects and house owners where every design for aesthetic appeal needs to be reviewed due to bird droppings. For factories where birds create a havoc leading to direct monetary losses, it is the worst site to have a nest or group of them visiting the site regularly. Bird droppings are acidic and can cause permanent damage to stone and painted metals. Also, the diseases they spread includes breathing and skin disorders. It may be good luck in a few cultures to have a bird dropping on your shoulder, but surely nobody likes it. We definitely want to get rid of them from perching and poaching in our homes and outside, without causing any harm to them. Finally, a solution is offered for the first time in India with years of success in USA and Europe.

Bird-Edge ™ - Preventing Bird Menace Worldwide

Bird-Edge™ is the most effective and the only permanent cure to do away from birds perching and poaching. It is a specially designed product of polycarbonate base (with UV Filters) with stainless steel spikes or completely plastic. It is glued with a very powerful adhesive to concrete / metal / wood / stone / glass and any other surface. These spikes prevent the birds to sit on the surface installed. It is extremely uncomfortable and hurts the bird. The spikes do not kill nor injure the bird but just pokes them so they do not sit on it. Birds have a good memory and the presence of the spikes prevents them from visiting the same place again. It is a very simple and effective theory, however a very specially designed product.

Since image and hygiene are very important and conservation of structures is given high importance, it has become more or less obvious to install these spikes in most leading buildings. Bird-Edge ™ boldly offers the following assurances :

- 1) No more bird droppings. This product is designed in such a way that it is not noticeable from a distance. Also, up close, it appears very neat and interesting to look at
- 2) It is not dangerous for humans, animals and birds.
- 3) Visitors and on-lookers will admire the product and appreciate the efforts taken to maintain the building.
- 4) The user will thank his decision to install this product that saves him time and money



The Neelkamal Plastics building at MIDC, Andheri (E) in Mumbai.

for keeping his building aesthetically beautiful. It makes him feel "clean".

5) The user will get his money's worth. The product works with zero maintenance.

The products are assured for the life of the building. It has been successfully installed in various locations where the applications have been on trusses, ledges, air conditioners, lighting equipment, awnings etc. To name a few areas of use in Mumbai, they have been installed in heritage buildings (The Prince of Wales Museum), private office buildings (Neelkamal Plastics) shopping malls (CR2), recreation facilities (The Club), hotels (Holiday Inn), residential buildings (Hiranandani Builders) and many others, where bird droppings have

completely been prevented / eradicated with full satisfaction.

The cost of the product is negligible as compared to the savings due to the avoidance of repeated painting and less frequent cleaning regimen. The place looks like new. With a product as successful as this, it appears to be the obvious choice for most, who want a cleaner and healthier surrounding.

For further details, please contact: AUSTENITIC STEELS PVT LTD, 801, Bombay Market Building, Tardeo Road, Mumbai – 400 034; Tel: 022-5662 7333; Fax: 022-5662 7393;

Email: sswire@vsnl.net;

Contact Person: Mr Parikshit Vaid



Portable kits for rapid tests on stainless steel

The first possible test is the check of the passive state of stainless steel surfaces.

The essential feature of these materials which gives them the well known resistance to corrosion is the formation, on the surface, of a thin and transparent oxide layer, called passive film.

By means of proper reagents it is therefore possible to verify whether the passive film is in the ideal condition to protect the material underneath.

This happens making a particular substance react with the surface of the stainless steel component for at least one minute, then absorbing the drop with a filter paper and adding on it another reagent. According to the colour taken by the paper it is possible to determine whether stainless steel is passive or not.

Another important check that sometimes is required is to find out the possible presence of molybdenum so as to distinguish AISI 304 from AISI 316. In this case too, easy tests with proper reagents makes it possible to distinguish between the two grades.

An alternative testing method consists of using electrochemical reagents. Finally, again with electrochemical systems, by means of a new reagent, which is sensitive to manganese, it is possible to distinguish AISI 200 series austenitic stainless steels from AISI 300 series austenitic ones.

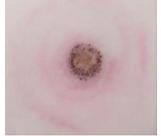




NO 316

YES 316





NO 316

YES 316

Information courtesy: Centro Inox (the Italian Stainless Steel Development Association), Web: www.centroinox.it

Test kits distributed by: NDT Italiana Srl – Via del Lavoro 28 – I-20049 Concorezzo MI; Tel: +39 039 647590; Fax + 39 039 647799; Email: info@ndt.it; Web: www.ndt.it

Figure 1 – Results of a test where the presence of molybdenum is revealed by chemical reagents. Figure 2 – Results of a test where the same purpose is achieved by an electrochemical method.

Figure 3 – Example of electrochemical test.



National Quality Award for Salem Steel Plant

Salem Steel Plant (SSP), a special steels unit of Steel Authority of India Limited (SAIL), has won the National Quality Award 2005 from the Indian Institute of Metals in the Pig Iron/DR Unit/Major Re-rolling mill category. Mr P M Balasubramanian, General Manager (Works), SSP, received the award on behalf of the plant from Dr Mano Ranjan, Secretary, Ministry of Steel, at the National Metallurgists' Day function held at Chennai on Nov. 14, 2005. The award was given to SSP for its image of quality and implementation of Quality Management System.

Information courtesy: Salem Steel Plant, SAIL, Salem – 636 013, Tamil Nadu.

Mr P M Balasubramanian, (left) receiving the award from Dr Mano Ranjan.



NOIDA lab chooses stainless steel



Stainless steel tops made of 316 grade have been installed in various laboratories of National Institute of Biologicals, Sector – 62, NOIDA. About 3000 kg of SS 316 grade material have been used. These SS tops were chosen due to their high corrosion resistance to various chemicals and gases used in labs, and for their cleanability and aesthetics.

Designs and Planning were by M/s Zimmer Gunsul Frasca Partnership, Portland, Seattle, Los Angeles, USA. *Stainless steel fabrication by:* SIMPLE ENTERPRISES, 6604 / 2, Nabi Karim, Qutab Road, Pahar Ganj, New Delhi – 110 055. Tel: 011-2351 8520; Fax: 011-2361 5450. E-mail: info@simple.co.in.

Welcoming New Members

Twenty First Century Wire Rods Ltd

The promoters of the group have been in steel Industry since 1983. Mr Vinod M Goel, Chairman had started his business at the age of 25 as a manufacturer of alloy steels, and had set up a steel melting unit at Taloja near Navi Mumbai. With hard work and his dedicated efforts, the business grew in leaps and bounds. With the list of satisfied customers Twenty First Century started ship breaking business in 1987. Twenty First Century has set up its own sponge iron production of 300 MT daily. Now the company has entered into manufacturing stainless steel of 304, 410, 420 & 431 grades through AOD process. Twenty First Century Steel is a mini steel plant in India producing stainless steel, mild steel, alloy steel and sponge Iron. The steel plant of Twenty First Century has a complex configuration consisting of computerised process controls, and argon oxygen decarburisation technology

to manufacture speciality steels, including stainless steel. The company has three units spread out at Goa and Silvasa for manufacturing mild steel and stainless steel having an aggregate production facility of 1,14,000 MTPA; the company is currently manufacturing 81,000 MTPA. Twenty First Century has a turnover exceeding Rs 100 crores a year (US \$ 25 Million). Twenty First Century's leadership in steel technology is built on a long history of pioneering, kept alive by its ever modern facilities and processes, adaptive absorption of advanced technologies and sustained in-house research & development.

TWENTY FIRST CENTURY WIRE RODS LTD,

501, Garden View, 5th floor, Gulmohar Park, Gulmohar Road, Juhu, Mumbai - 400 049;

Tel: 022-5606 2076, 2671 6968 / 6951; Fax: 022-2628 3871; E-mail: twentyfirst@vsnl.net; Web: www.21stcenturysteel.com

Batliwala Process Engieering

Batliwala Process Engineering is a company with over 30 years of experience in the steel fabrication business. Engaged in manufacturing of stainless steel products, the Batliwalas have given a new meaning to the utility of steel. With the passage of time, newer dimensions have evolved. To cater to industrial and commercial requirements simultaneously, BPE offers its

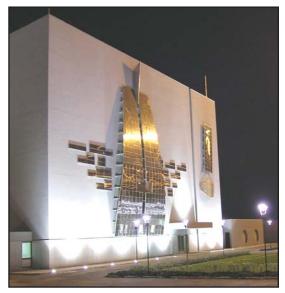
specialised services through: B-rails which is a specialized service in the latest technology and design in railings; B-Steel which is lifestyle accessories in steel, enhancing form and function in residences and office alike.

Batliwala Process Engineering, 720/5, Opp. Sadani Dhabi Bus Stop, Narol-Vatva Road, Vatva, Ahmedabad - 382 440.

Tel: 079-2571 2573; Fax: 079-2573 0611.

E-mail: info@batliwala.com; Web: www.batliwala.com





Batliwalas' large sized stainless steel murals at the cargo terminal of Chennai port.

Hindustan Hydraulics Pvt Ltd

Hindustan Hydraulics was founded in 1965 by Mr. M.M.S Khosla. HHPL is one of the largest single unit in India manufacturing the widest range of high technology sheet metal working machines like CNC / NC Hydraulic Press Brakes, CNC / NC Shearing machine & CNC Hydraulic Punch Presses in a wide range. HHPL has provided Indian industry with a steady stream of innovative, productivity enhancing sheet metal machines since its inception.

HHPL is exporting a large number of machines to various countries such as AUSTRALIA, GERMANY, MALAYSIA, DUBAI, SINGAPORE, KOREA, SPAIN, and TAIWAN. HHPL has undertaken over 376 installations of CNC Press Brakes, 345 installations of NC Hydraulic Shearing machines and 26 installations of CNC Hydraulic Punch Presses.

HHPL has satisfactory installations with major companies such as L&T, CROMPTON, BLUE STAR, RITTAL, TELCO, JCB, LMW, HITACHI, CARRIER, ELGI, BHEL, VEHICLE **FACTORY** JABALPUR, VISHAKHAPATNAM. In the Railways the company has various installations through COFMOW. The company serves markets like aerospace, air conditioning, visi- cooler, job shop, bottling plant, construction equipment, packing machine, control panel, bus body builder and various sheet metal working centers. The company's organizational strength and its resources, as a leading engineering organization, has proved to be of lasting benefit to its customers.

HHPL's machines are manufactured as per latest DIN / ISO standards, with internationally

followed accuracies. HHPL has the latest state of art manufacturing facilities with over 17 CNC, UMC/ HMC/ Boring machines. Engineers with through knowledge provide assistance in selection of the equipment and fixing the most appropriate specifications and tooling solutions. In addition they also help the customers in installation, testing and commissioning of the equipment supplied. The system-engineering departments consisting of a number of specialists to introduce better production technologies by suggesting improvements on their existing machine and also by suggesting the installation of better equipment. HHPL's products have been greatly appreciated and its staff are working to the entire satisfaction of the customers.

HINDUSTAN HYDRAULICS PVT LTD, G T Road, Suranussi, Jalandhar 144 027, Punjab; Tel: 0181-267 0054 / 55 / 56; Fax: 0181-267 0053; Email: hhpl_sales@vsnl.net Web: www.hindustanhydraulics.com

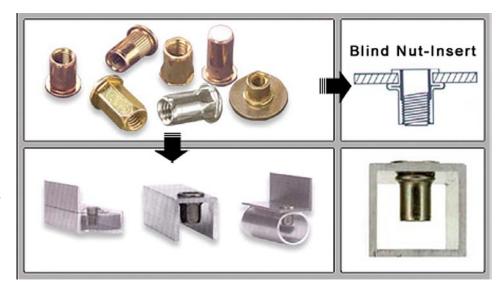


CRU-ISSDA Conference Presentations on CD

CRU-ISSDA conference PowerPoint presentations are available in a CD for organizations in India. Each CD is priced at Rs 1,000/- including packing and forwarding charges. For obtaining a CD, please send payment favouring Indian Stainless Steel Development Association, payable at Delhi to: ISSDA, K-36 (FF), Hauz Khas Enclave, New Delhi – 110 016; Fax: 011-2686 3376; Email: nissda@gmail.com. (Please give your postal address)

Kapasi Inc.

Kapasi Inc., with years of experience in serving OEM markets with new technology assembly solutions, stock and offer a comprehensive range of specialised PROCESS CONTROL imported FASTENERS AND RIVETS especially for SS FABRICATION AND ASSEMBLIES, which drastically increase productivity by reducing labour time, welding, secondary processes, consumables. The products are competitively priced to serve the total requirements from the conception of design to the end-product. The company's portfolio of products coupled with the expertise of hi-end fastener manufacturers from different countries like, USA, UK, Germany, Australia, Singapore, Spain, Italy etc enables the end-user to specify and source its products with confidence for the user's engineering equipment / products / assemblies. The company's basket of products are cold forged and are of hi-strength, and are well designed and properly selected to provide cost-saving solutions to sheet-metal assembly and fabrication and improving the quality of the end product with aesthetics and



engineering excellence. As a team of engineers, the company helps its customers solve difficult application problems and offers hi-tech fasteners and rivets which can be installed within seconds - its tech-team is always ready to assist with practical solutions and new concepts in sheet-metal joining and assemblies through value engineered fasteners and rivets.

KAPASI INC., No.28, Thangam Mahal, 1st Floor, S.P. Road, Bangalore - 560 002 E-mail: kapfast@vsnl.com; Tel: 080-2221 0997, 2227 9217, 5124 3735; Fax: 080-2221 0997; Web: www.weldless-fastenings.com for detailed product descriptions, animated demos, printable tech-specs, advantages, applications etc...

Kuma Stainless Tubes Ltd

Kuma Stainless Tubes Ltd is a Indo-Japanese Joint Venture. Incorporated in the year 2003 in Gurgaon for manufacturing of high-quality high frequency induction welded precision stainless steel and aluminized tubes, Kuma today is equipped with latest state-of-the-art technology of tube mill from the world's leading manufacturer -Kusakabe Electric and Machinery Company Limited, Japan with an installed capacity to produce 20,000 tons per annum. Kuma manufactures stainless steel tubes in different grades and aluminium coated mild steel tubes. The company has got a comprehensive size range, for various industrial applications like automotive exhausts, to heat exchanger industry, with outer diameter ranging from 20.00 mm to 65.00 mm and thickness ranging from 1.00 mm to 3.00 mm. Tubes are manufactured to Japanese, American and customer specification. Stainless tubes find application in various

industries like Automotive Exhaust, Petrochemicals, Heat Exchangers, Furniture and Decorative industry.

KUMA STAINLESS TUBES LTD. Plot No. 27, Sector 2 A, IMT Manesar, Gurgaon 122 050, Haryana;

Tel: 0124-395 3662, 394 4823; Fax: 0124-221 5335;

E-mail: haresh@kumatubes.com;

Web: www.kumatubes.com





Sudhir Automotive Industries Pvt Ltd

Sudhir Automotive Industries Pvt Ltd (SAI), is a pioneer in the manufacturer of stainless steel fasteners for the last 15 years. Its Board of Directors belong to pioneers of fasteners technologies in India. The company has the capacity of 800 MT per year and is run by professionals, who are highly cost conscious and have the team spirit to serve its esteemed customers beyond the satisfactory level. Besides Cold/Hot Forging facilities, all the infrastructure for turned components is available along with the best QA facilities and systems, in collaboration with companies having ISO 9001, ISO 14001, NABL certifications. The company has a large dealer network all over India, huge nos. of prestigious OEMs as end users of SAI Brand and supplies to a leading Export House. SAI is committed to produce and supply quality precision fastener of type/size/class/grade/finish to meet or exceed the expectations of the customer.

SUDHIR AUTOMOTIVE INDUSTRIES PVT LTD, 301, L.S.C., Plot No. 5, Derawala Nagar, Gujrawalan Town, Phase-IV, New Delhi – 110 009; E-mail: ss316@rediffmail.com



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Ahmedabad airport gets stainless sprucing

In the Ahmedabad airport building approximate 100 columns and walls are clad using AISI 304 sheets in 2B hairline finish. Approximately 7 tonnes of stainless steel were used for this purpose. Almost all the columns are of the size 1 m x 1 m square with cladding extending up to 725 mm. Each column is divided into eight parts for the purpose of cladding. The four corners are of vertical hair line finish and the middle portions are in horizontal hairline finish. This results in a 'different' look! The purpose of the cladding is to eliminate the column damage caused by baggage trolleys.

The main contractor of the project was M/s M S Khurana Eng. Ltd and the stainless steel cladding and other works were done by M/s Geeta Industries, Ahmedabad. The stainless steel sheets were supplied by Jindal Stainless Ltd.

Contact details of the stainless steel fabricator:

Mr Haresh Panchal / Mr Ramesh Panchal, GEETA INDUSTRIES, 4 NTM Compound, CTM Cross Road, Amraiwadi, Ahmedabad – 380 026; Cell: 0-98258 52710, 0-94265 16678; Tel: 079-2585 4627, 2539 0036;

Fax: 079-2585 2926;

E-mail: aadeshenterprise@yahoo.com



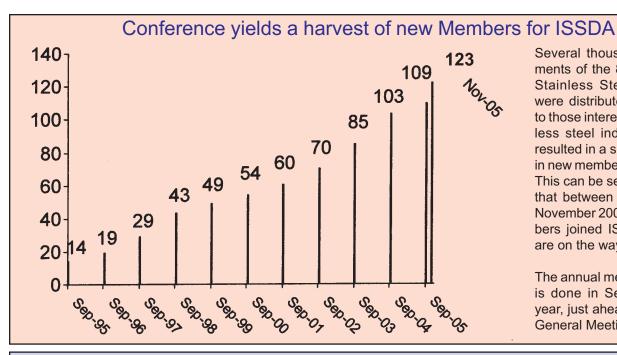
NI publication

Fabricating Stainless Steels for the Water Industry - Guidelines for Achieving Top Performance (Reference Book Series No. 11026)

This document provides information for fabricators, designers, specifiers and end users about stainless steel fabrication practices and their implications on corrosion behaviour when exposed to waters and waste waters. Originally written to assist engineers involved in the UK water industry, its content is also relevant internationally. Additional information, frequently requested, about grade selection guidelines, alloy properties, design and health and safety aspects is included.

For obtaining a copy of this publication, please write to (giving your postal address): **Nickel Institute**, K-36 (FF), Hauz Khas Enclave, New Delhi -110 016.

Fax: 011-2686 3376; E-mail: nissda@gmail.com



Several thousand announcements of the 8th International Stainless Steel Conference were distributed far and wide to those interested in the stainless steel industry. This has resulted in a sizeable increase in new membership enrolment. This can be seen from the fact that between September and November 2005, 14 new members joined ISSDA and more are on the way.

The annual membership count is done in September every year, just ahead of the Annual General Meeting.

ISSDA Members (for contact details of members, please visit www.stainlessindia.org)

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Steel Authority of India Ltd

(Alloy Steels Plant + Salem Steel Plant)

Sunflag Iron & Steel Co Ltd Twenty First Century Wire Rods Ltd

Viraj Alloys Ltd

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