

STAINLESS INDIA

A MAGAZINE PUBLISHED BY

**Indian Stainless Steel
Development Association**

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FEBRUARY 2004

Stainless Steel Obelisk at Lucknow designed for 100 years !

An obelisk (*stambh*) about 19 metres high clad with AISI 316L stainless steel sheets has been installed at the Dr Bhimrao Ambedkar International Library and Museum of Social Changes at Gomti Nagar in Lucknow. The project has been promoted by the Uttar Pradesh Rajkiya Nigam Ltd, Lucknow. The cladding was done over a conical RCC column with 4mm sheets in No. 4 finish. The sheets were supplied by Salem Steel Plant-SAIL.

Contact details of the stainless steel fabricator: SREEVATSA STAINLESS STEEL FABRICATORS (P) LTD, 1 / 376, Mugalivakkam, Porur, Chennai – 600 116; Telefax: 044-2252 3469 / 3479 / 3489; E-mail: sreevatsai@hotmail.com

Nickel Institute Launched

Dr. Ivor Kirman, the President of NiDI, announced today the launch of the Nickel Institute. The Institute, whose members represent over 70% of current world production, will generate and communicate knowledge required to support safe and sustainable production, use and reuse of nickel.

For consumers, governments, regulators and other stakeholders, the Nickel Institute is committed to responding effectively to the growing requests for nickel-related information. For nickel producers and users it will offer research-based, cutting-edge science and technical information. "Nickel is the great enabler for modern society but an integrated response is required for the technical and environmental challenges...and that's our mission", said Dr. Kirman.

The Institute provides a single membership and management structure for activities previously undertaken by the Nickel Development Institute (NiDI) and the Nickel Producers Environmental Research Association (NiPERA). NiPERA is an independently incorporated division of the Nickel Institute, continuing as a well-respected provider of peer-reviewed, published information on the human health and environmental science of nickel.

The Nickel Institute will continue the use-related technical work of NiDI, but will focus more on nickel issues related to stewardship and sustainable development, especially the generation and use of knowledge about the full life cycle impacts of nickel.

Nickel plays an essential enabling role in many areas of rapidly-changing technology such as transport, energy, architecture, telecommunications, food processing, water treatment, environmental protection and healthcare. Knowledge generated and disseminated by the Nickel Institute will support safe and sustainable production, use, and reuse of nickel for today and for a brighter future. (*Extracts from the press release dated March 1, 2004.*)



Stainless Steel abounds in Ing Vysya Bank, Bangalore



The recently opened landmark building ING VYSYA BANK on Bangalore's MG Road is a typical example to showcase the various applications of stainless steel on architecture, building & construction. The entrance and the exit gates are fabricated by using a combination of stainless steel tubes and perforated stainless steel sheets. The compound wall railing that appears like the wings of a bird in motion is fabricated using 50 mm and 32 mm diameter stainless steel tubes bent to the required profile. The junction of the 50 mm tube and the 32 mm tube is a pin-welded joint that enhances the beauty of the railing. Nearly 140 metres of stainless steel railing has been used for the compound wall.

The fixtures holding the lighting arrangement, the bands around the vertical posts on the compound wall, the railing for handicapped persons, ramp and terrace railing, supporting members for the entrance canopy are all fabricated using stainless steel sections. But the most striking feature of the entire building facade is the two stainless steel columns at the entrance. The columns 3 feet in diameter rise majestically to a height of 70 feet and are clad using 0.8 mm thick stainless steel sheets of RIMEX in embossed finish; the sheets were supplied by M/s New Era Industries, Delhi.

In the internal atrium of the building, 220 metres of railing have been designed using 50 mm diameter stainless steel tubes and the 19 mm thick toughened glass panels are held in position using stainless steel glass fixtures. The railings act as barricades and add to the aesthetic appearance of the entire surroundings. Even the louvers used for the wooden doors are fabricated using stainless steel sheets. All the stainless steel sections for railings and column cladding and fixtures were fabricated by M/s Stallion Systems Pvt Ltd, Bangalore.

Another interesting piece is the large stainless steel sculpture, designed by Mr Balan Nambiar, Bangalore. About 1,300 kg of stainless steel was used in the sculpture. The sculpture is 5.2 metres tall; the width of the outer ellipse is 3 metres. The sculptor specified AISI 304 stainless steel for reasons of aesthetics, durability, appropriateness of the specific ambience of the building. The sculptor is designed in Auto CAD and the pieces were laser cut at M/s Magod Laser Machining (P) Ltd at Jigini near Bangalore. The sculpture was conceived keeping in mind of the sponsor's logo and the world outlook of their business.



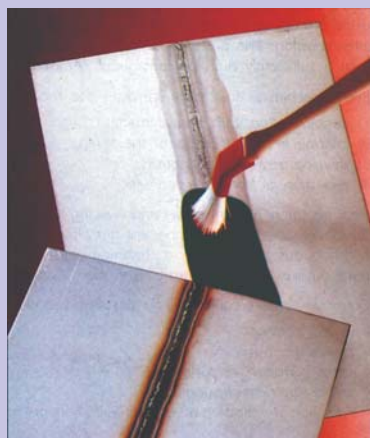
Contact details of the stainless steel fabricator: STALLION SYSTEMS PVT LTD, # 15 Shantappa Lane, S J P Road Cross, Bangalore – 560 002; Tel: 080-2674 7678, 2674 4118; Mobile: 080-318 55399 (Mr Kamallesh Mehta).

Contact details of the sculptor: Mr Balan Nambiar, No. 1, 10th Cross Road, Jayamahal Extension, Bangalore – 560 046; Telefax: 080-2333 1536; E-mail: bnambiar@vsnl.com

Contact details of the RIMEX sheet supplier: NEW ERA INDUSTRIES, 51 Adchini, Sri Aurobindo Marg, New Delhi – 110 017; Tel: 011-2652 6210, 26969410, 26960411

Fax: 011-2685 3573; E-mail: newera@del2.vsnl.net.in

FUMELESS PICKLING & PASSIVATION CHEMICALS FOR STAINLESS STEEL



◀ K-2 Paste [Gel Form] :

It is used to clean Weld seams, rustspots, annealing colours, oxide scales, surrounding the welds.



Other K-2 Range of Chemicals :

- ▶ **K-2 Dip [Liquid Form] :** To clean complicated items, wire rolls, internal recessed areas of machinery and also internals & externals of SS Pipelines.
- ▶ **K-2 Passivation [Liquid Form] :** It is a must to be followed after every pickling process, in order to protect the surface from further corrosion & contamination.
- ▶ **K-2 SSA [Inhibitor] :** Additive for Bulk Pickling Lines of Stainless Steel to give extra brighter & lustrous finish as well as to make environment more user friendly.

Unique Features of K-2 Chemicals :

1. Removes Built In Corrosion from Stainless Steel.
2. Removes Scales, Discolouration & Ferritic Contamination.
3. Stops Corrosion & Restores Full Corrosion Resistance.
4. Removes Metallic Contaminants, Oxide Scales, Rust Spots & Annealing Colours.
5. Gives A Flawless, Uniform, Smooth Contamination Free, Sterile Particle Free, Passive Surface.

K-2 Spray [Semi-Gel Form] :

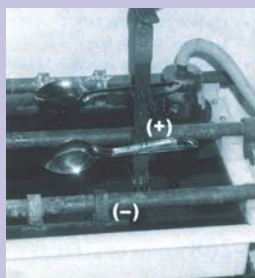
It is used to clean large fabricated equipments of Stainless Steel internally & externally by means of a pressurized spray bottle or pump.



WE ALSO UNDERTAKE PICKLING & PASSIVATION JOBWORK ON SITE

Fields of Applications :

All Stainless Steel Pharmaceutical Machinery / Chemical Process Plants / Dairy Machineries / Beverages Process Systems / Pressure Vessels / Storage Tanks / Heat Exchangers / Reactors / Process Plants / Huge SS Equipments / SS Pipelines etc. with complete range of K-2 Chemicals.



SI-268 Electropolishing System for Stainless Steel : A superior Electrolyte for mirror bright finish on stainless steel surfaces.

K-2 Bio Passive : A Nitric Acid Free [Chelant Passivation] Technique for Pharma/Food/ Dairy/Beverage Industry.



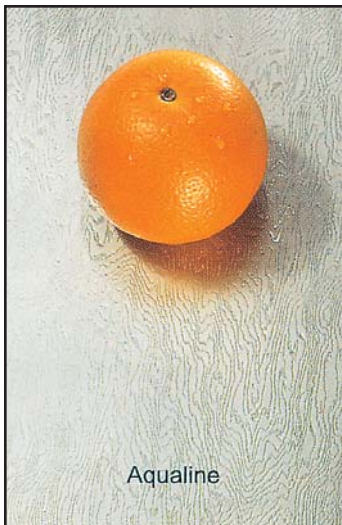
SURFACE INNOVATORS PVT LTD

Surface Treatment People...

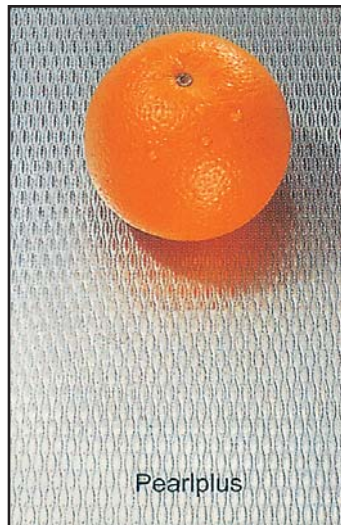
40-B, Dossa Compound, Next to Simplex Mill, K K Marg,
Near Jacob Circle, 7 Rasta, Mahalaxmi, Mumbai – 400 011,
Tel: 2300 5205 / 2309 7759. Fax: 2300 5206 / 2430 0185, E-mail: surface@bom3.vsnl.net.in,
Website: www.surfaceinnovators.com

Approved as per ASTM-A380 STANDARDS
IN TECHNICAL COLLABORATION WITH POLIGRAT GMBH

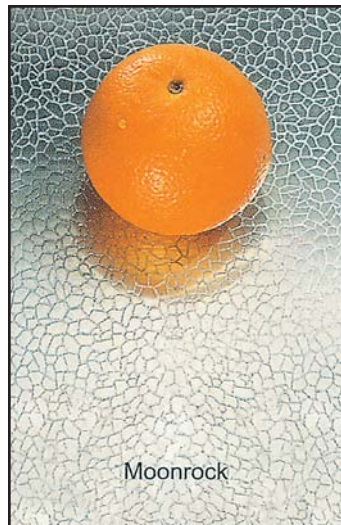
Special Finishes from Salem Steel Plant



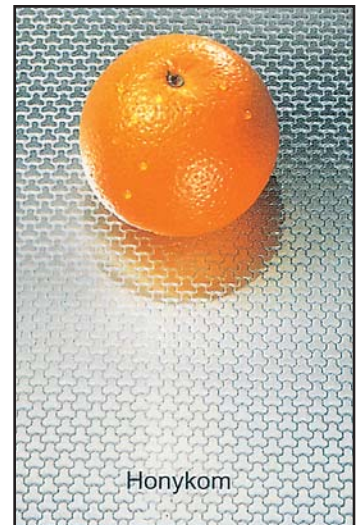
Aqualine



Pearlplus



Moonrock



Honykom

Salem Steel Plant-SAIL has introduced stainless steel sheets in many special finishes for architectural applications. Other than the common finishes of No. 4 and No. 8, the special finishes are Mystique, Hammertone, 24 Grit, Epiderma, Pearlplus, Fabrique, Chequered, Macromatt, Stripes, Honeykom, Moonrock, Frondz,

Aqualine. For details please contact: Salem Steel Plant-SAIL, Marketing HQ, Salem – 636 013, Tamil Nadu
Tel: 0427-238 2236 / 2444; Fax: 0427-238 3249
E-mail: sspsalem@hclinfinet.com
Web: www.sail.co.in

Stainless Steel Spiral Staircase for Reliance Webworld



About 400 kg of stainless steel 304 grade in mirror finish were used for fabricating the spiral staircase at the Reliance Webworld in NOIDA near Delhi. The stainless steel fabrication was done by Mr Vipul Rastogi, D-ART INTERNATIONAL, E-34, Jawahar Park, Near Vikas Marg, Laxmi Nagar, Delhi – 110 092; Tel: 011-2243 4052, 2243 7917; Mobile: 011-3304 0548; Fax: 011-2241 3774.

International Conference & Exhibition MMMM 2004

Tafcon is organizing the 5th Minerals, Metals, Metallurgy & Materials (MMMM 2004) Trade Fair & Seminar on September 9-12, 2004 at Pragati Maidan, Delhi. The biennial event, MMMM 2004, is sponsored by the Indian Institute of Metals / IIM-Delhi Chapter and co-sponsored by the Ministry of Mines, Ministry of Heavy Industries & Public Enterprises, Ministry of Small Scale Industries, Council of Scientific & Industrial Research (CSIR) and the Planning Commission.

The event is also supported by many foreign and Indian associations like the Australasian Institute of Mining & Metallurgy, Chinese Society for Metals, Steel Institute VDEh, Minerals, Metals & Materials Society, Korean Institute of Metals & Materials, International Iron & Steel Institute (IISI), Federation of Indian Mineral Industries (FIMI), United States - Asia Environmental Partnership (US-AEP) .

For more details, please contact: TAFCON GROUP, C-60, Nizamuddin East, New Delhi – 110 013; Tel: 011-2435 2141 / 2144 / 2182 / 2184; Fax: 011-2435 5215 / 4077
E-mail: tafcon@del2.vsnl.net.in Web: www.tafcon.com

Stainless Steel Garden Furniture



Stainless steel garden furniture, made of wires and tubes, at a private residence in Ahmedabad. The furniture has been fabricated by M/s Rupen Engineers Pvt Ltd, Gujarat. *Contact details of the stainless steel fabricator:* Mr Suresh Patel, RUPEN ENGINEERS PVT LTD, 117 / 4, Ravi Industrial Estate, Bileshwarpura, PO Chhatral – 382 729, Distt. Gandhinagar (N. Guj.); Tel: 02764-234 002; Fax: 02764-233 513; E-mail: rupenengg@wilnetonline.net



Steel Pavilion wins 2nd prize IITF 2003



from left to right: Mr J P Singh, Joint Secretary, Ministry of Steel, Mr Ashok Jha, Chairman & Managing Director, ITPO, Mr Vijay Kapoor, Lt. Governor, Delhi, Mr Ranjan Chatterji, Executive Director, ITPO.

The Ministry of Steel, Govt. of India displayed many steel products for rural and urban usage at the Steel Pavilion in the India International Trade Fair (IITF) which was held in Delhi from November 14-27, 2003. ISSDA displayed many stainless steel products samples of member companies. The Steel Pavilion was



awarded the 2nd prize under the category of government exhibitors. IITF is organized every year by the Indian Trade Promotion Organization (ITPO).

ISSDA's workshop at BEML, Bangalore

The ISSDA workshop held at the Bharat Earth Movers Ltd (BEML) Bangalore on Jan. 6, 2004, was a success with about 60 of their personnel including managers, engineers, welders and supervisors attending the session. BEML is assembling the stainless steel railway coaches for Delhi's metro transport system and the workshop was meant to familiarize their technical staff with the properties of stainless steel, design, fabrication and welding aspects.

Mr Ramesh R. Gopal covered the material properties and applications. Mr V R Ramesh, a welding consultant in Bangalore, covered practical aspects of obtaining good welds. Representatives from Esab India Ltd informed the audience about the appropriate welding products for different grades and welding processes. A presentation on cleaning and passivating stainless steel welds was made by Surface Innovators Pvt Ltd.

ISSDA's ABC Workshops - Bangalore & Chennai



Bangalore workshop - left: Mr N C Mathur, President, ISSDA and Director, Jindal Stainless Ltd; right: The Chief Guest Ar. Arunjot S Bhalla, M/s RSP Architects & Planners.

Chennai workshop: left: Mr P M Balasubramaniam, General Manager (W), Salem Steel Plant-SAIL; right: The Chief Guest Ar. C N Raghavendran, M/s C R Narayana Rao Architects & Engineers.

The Architectural, Building & Construction (ABC) workshops at Bangalore (Jan. 7, 2004) and Chennai (Jan. 10, 2004) were a big success with about 120 architects and engineers participating at each of the places.

Leading architects of the concerned cities i.e., Mr Arunjot S Bhalla (M/s RSP Architects & Planners in Bangalore) and Mr C N Raghavendran (M/s C R Narayana Rao Architects & Engineers in Chennai) were the Chief Guests. They shared their views on their experience in using stainless steel in the architectural sector and what the stainless steel industry needs to do to increase further its the usage.

The Bangalore workshop was jointly sponsored by the Architectural Division of Jindal Stainless Ltd and Stallion Systems Pvt Ltd. At Chennai, Salem Steel Plant-SAIL sponsored the workshop. The speakers for workshops included representatives from Jindal Stainless Ltd, Salem Steel Plant-SAIL, Suhner India Pvt Ltd and ISSDA Secretariat.



Stainless steel sheet samples of Salem Steel Plant-SAIL displayed at the Chennai workshop.

IMOA publication Selection of Stainless Steel

The International Molybdenum Association (IMOA) has published brochures on the selection of stainless steel in demanding outdoor environments. The brochures are targeted at architects and designers. IMOA's architectural consultant Ms Catherine Houska (TMR Stainless in Pittsburgh, USA) has used her extensive experience, study of a vast literature and inputs from stainless steel specialists and architects in Asia, Australia, Europe and North America in developing a site and design evaluation system. Thus the evaluation system is applicable to most situations and climates around the world. The brochures also include case studies which illustrate the use of the evaluation system and lead the architect through the thought process of selecting the correct grade.

For a copy of the IMOA brochure, please contact (give your postal address): ISSDA, K-36 (FF), Hauz Khas Enclave, New Delhi – 110 016; Fax: 011-2686 3376; E-mail: nidissda@del3.vsnl.net.in



Stainless steel finishing kits of M/s Suhner India Pvt Ltd displayed at the Bangalore workshop.

Stainless Steel Wire and Wire-Mesh



Macro Bars and Wires (India) Pvt. Ltd. (Macro™) are manufacturers and exporters of Stainless Steel Wires. With manufacturing experience since 1978, they are offering wires for various applications to over 40 countries. They offer a wide size range from 0.10 mm – 24 mm diameter in all finishes and most grades. In an effort to further satisfy customer needs, they offer Flat and Shaped Wires too. They are virtually a one-stop shop for Stainless Steel Wires.

Macro™ and GKD have tied up for the supply of Stainless Steel and Nickel Alloy Wire Meshes for Industrial Applications in India. GKD, since 1925 and with a strength of over 550 people all over the world, manufacture "Precision Weave" and "Solid Weave" wire meshes. They guarantee Precision and Reliability for all the wire meshes from a filtration of 3 μ to 600 μ . Applications vary from Aerospace/ Breweries/Chemical/ Food Industries. They not only supply wire meshes but are effective in offering individual solutions, reliability and competence.

For more information, please contact:

Macro™: Email: mbw@mbwindia.com Tel: +91-22-23523757; Fax: +91-22-23524758 GKD: www.gkd.de

Stainless Steel Furniture for Qatar



Stainless steel podiums for display of electronic equipments like PC, laptops, fax machines were supplied to the New Mannai Showroom at Salwar Road in Doha, Qatar. The stainless steel fabrication was done by M/s Kaushal Engineers, Delhi. About 1.5 tonnes of stainless steel was used for these display



stands. *Contact details of the stainless steel fabricator:* Mr G S Rathore, KAUSHAL ENGINEERS, 432, 5th floor, Tower 2, Mount Kailash, New Delhi – 110 065; Telefax: 011-2621 2339; Mobile: 0-98100 21405, 011-3093 8481, 0144-310 2173.

International Conference **ASIAN STAINLESS OUTLOOK 2004** Hanoi, Vietnam March 9-10, 2004

The conference will focus on many subjects including the expected demand and supply for stainless steel in Asia and the world; impact of chromium and nickel on the stainless steel industry; China's role in the global stainless steel industry; Vietnam's stainless steel demand etc. For more details, please contact:

IBC ASIA (S) PTE LTD, No. 1, Grange Road, # 08-02 Orchard Building, Singapore 239 693 Tel: (65) 6732 1970, 6835 5135; Fax: (65) 6733 5087, 6736 4312; E-mail: Yuhtyan.lew@ibcasia.com.sg Web: www.ibc-asia.com/registryform.htm

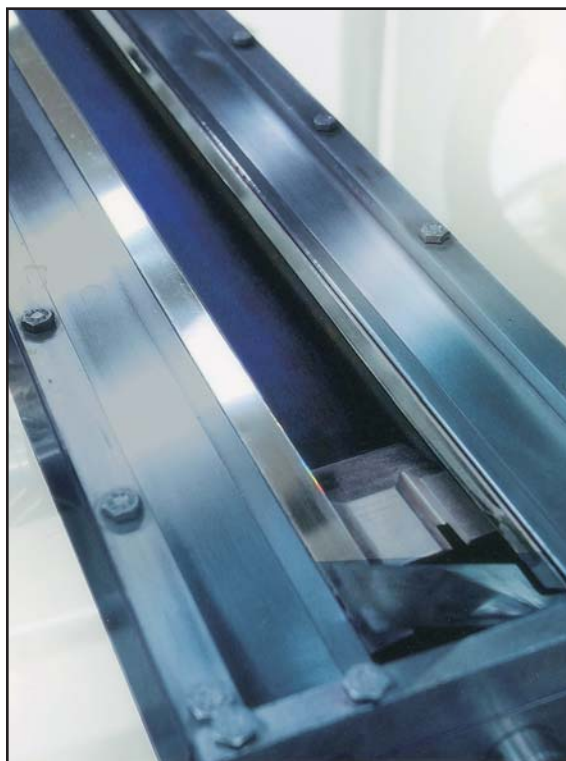
Builders give the nod to Stainless Steel



The paper **“Stainless Steel For Beauty, Permanence, Utility And Prestige”** was awarded the 2nd prize at the 1st International Exhibition and Conference on Building Materials and Construction Technologies (BMCT'04) held in Delhi from February 12-15, 2004. In all 25 papers were presented during the 4-day conference. BMCT'04 was organized by the Department of Industrial Policy & Promotion (Ministry of Commerce & Industry), the National Council of Cement & Building Materials and the Builders' Association of India. ISSDA feels that the award is a recognition of the fact that the builders' fraternity considers stainless steel as a suitable material for use in architecture, building & construction (ABC).

The paper was authored by Mr Ramesh R. Gopal, General Manager-NIDI and Executive Director-ISSDA.

Sandvik's Strip for Doctor Blades



Sandvik Materials Technology is using its steel melting and strip producing expertise to optimise the material properties for doctor blades for gravure and flexographic printing process. Control and balancing of the steel's metallurgy results in strip steel with consistent properties. Specially developed hardening and slitting processes result in almost stress free material. Process control in the cold rolling mills ensures a high degree of straightness and flatness, high strength and wear resistance. Excellent surface finish contributes to both corrosion resistance and fatigue strength.

For more corrosive environments, required as a result of the increased use of water based inks, there are three stainless steel grades – Sandvik Chromflex 7C27Mo2, 13C26 and 6C27.

Such is the level of process control, that Sandvik can tailor the properties of strip steel for doctor blades to suit customer requirements. For example, the strip can be supplied with excellent straightness and flatness. This ensures perfect contact between the blade and the cylinder in a printing press or paper producing machine. It means that the blade pressure can be reduced, resulting in less blade and cylinder wear, extended service life and fewer blade changes.

For more details, please contact: Sandvik Asia Ltd, Mumbai Pune Road, Pune – 411 012, Maharashtra; Tel: 020-710 4562 / 4564; Fax: 020-714 5022; E-mail: steel.india@sandvik.com Web: www.smt.sandvik.com

Sandvik's Doctor Blade Steel ensures perfect dispersion of the printing ink and long service life.

Draft BIS standard for stainless steel domestic LPG cylinder ready

Readers may be aware that earlier there was no separate Indian standard for stainless steel LPG cylinders. However due to stainless steel's better corrosion resistance and mechanical properties including strength-to-weight ratio, stainless steel cylinders have become viable. Stainless steel cylinders are used in Australia, New Zealand, Spain etc. The Bureau of Indian Standard (BIS) has made a draft standard for circulation for stainless steel cylinders for storing and transporting LPG (5-250

litres water capacity). This standard when approved will be listed in IS 3196 (Part 5). An empty stainless steel LPG cylinder is expected to weigh about 50% less than an empty carbon steel cylinder of the same capacity. Thus the stainless steel cylinder will be easier to handle and will be a boon to housewives, LPG cylinder distributors, especially in the hilly regions. Stainless steel auto LPG cylinders, which are covered separately under IS 14899, are being manufactured in Baroda.



Workshop on Stainless Steel Fabrication at Puri, Orissa

The Biju Patnaik National Steel Institute (BPNSI), Puri, Orissa, established by the Ministry of Steel-Govt. of India, is organizing the National Workshop on Stainless Steel Fabrication in Puri, Orissa from April 8-9, 2004. The workshop is being organized in association with ISSDA, the Indian Institute of Welding (IIW) and the Indian Welding Society (IWS). The workshop will take stock of technological and operational developments, map issues, document problems and outcomes for the benefit of the user industry. Coverage of the workshop includes material selection, design, cutting, forming and fabrication, plasma / laser cutting, shearing, bending, drawing; welding techniques and processes

like SMAW, GTAW, GMAW, FCAW, PTAW, laser, electron beam welding processes, welding metallurgy and consumables, electrostatic cleaning, buffing & powder coating, surface treatment, non-destructive testing. The participation fee is Rs 4,500/- per delegate inclusive of boarding, lodging and local transport for two days and three nights. Venue : Hotel Toshali Sands, Puri.

For more details, please contact: Mr Jibak Banerjee, Convenor, BPNSI, Sea Beach Road, Puri – 752 001, Orissa.

Tel: 06752-232 820 / 880, 233 250 / 251;

Fax: 06752-232 567; E-mail: jibak@bpnsi.org

Welcoming New Members

M/s Bharat Earth Movers Ltd (BEML), Bangalore, M/s Esab India Ltd, Chennai and M/s Arm Innovations, Delhi have joined ISSDA as Associate Members. BEML is assembling the stainless steel metro coaches for the DMRC. Esab India Ltd is a leading supplier of welding equipment and consumables. Arm Innovations represents various

companies from India and abroad, involved in the finishing of stainless steel products (who manufacture machinery and consumables). The companies represented are: Suhner India Pvt Ltd, Grind Master India Pvt Ltd, Lippert Unipol India Pvt Ltd, Grindwell Norton India Ltd, IHPCO.

Ambica Steels Ltd, Delhi

Ambica Steels Ltd has managed to carve a niche for itself in the short span of a few years. It began production 1995 and has accumulated contented clientele till date. Located in Sahibabad (Distt. Ghaziabad, Uttar Pradesh), the company has an enviable crew on board. Its young, dynamic and professional management is aptly supported by a group of motivated, dedicated and qualified technicians. In short, this group is herding Ambica Steels towards its success. Ambica Steels manufactures and produces billets, ingots, round bars and flat bars encompassing various types of forged & rolled products, which find wide ranging applications in forging industries, bright bar & wire rod industries and stainless steel based fabrication industries. Ambica Steels has an installed capacity of 40,000 MT.

Ambica Steels has towering capabilities for manufacturing an assortment of austenitic and martensitic grades conforming to varied international standards. Ambica Steels has also shaped a strapping repute for supplying titanium, high nickel and low carbon grades to the leading forging companies in the country. Some grades to mention are 316Ti, 316L, 316, 317, 321, 304L, 304, 310, 410, 420 etc. Ambica Steels is brilliantly mounting its lately started exports of billets, rounds bars etc, to the Western continents. Ambica Steels has also reorganized its manufacturing facilities by adding the 9 / 16 meters twin strand continuous casting machine (CONCAST), two induction furnaces and another argon oxygen decarburiser (AOD) with the heat size up to 28 MT. It aims to go across the annual turnover of Rs. 400 Crores by the end of the year 2004-2005. The size of the billets available with the company are 120mm x 120mm, 140mm x 140mm, 160mm x 160mm and 200mm x 200mm. Sizes of the rolled rounds are: 32mm up to 125mm and forged rounds are 140mm to 300mm. Forging quality ingots are available in various sizes starting from 5.5 x 6.5 x 42 inches (weight – 185 kg) up to 27 x 30 x 62 inches (weight – 6,100 kg).

Moreover, the Quality Assurance Department at Ambica rigorously ensures that its products are customized in accordance to the requirements of its clients. The company has recently upgraded its ISO 9000 system to ISO 9001-2000 version, which is more focused towards its customers' requirements, certified by RW TUV Germany. In recent times, Ambica Steels has also obtained the certification for ISO 14001:1996. This international certification confirms that Ambica Steel's environmental management system has become mature in terms of its appropriateness, operational efficiency and implementation. Besides these, Ambica Steels is also equipped with AD 2000 Markblatt WO Certification and TRD 100 & P.E.D Approval.



These systems are proof of Ambica Steels commitment towards supplying better quality every time. Further information about Ambica Steels Ltd can be obtained from our website www.ambicasteels.com

Works: Ambica Steels Ltd, 51 / 2, Site IV, UPSIDC Industrial Area, Sahibabad – 201 010, Distt Ghaziabad, Uttar Pradesh.

Tel: 0120-289 7621 to 7625; Fax: 0120-289 7620;

E-mail: gupta7000@hotmail.com

Head office: Ambica Steels Ltd, C-54 / 1, Wazirpur Industrial Area, Delhi – 110 052; Tel: 011-2737 6851 to 6854, 2727 4611, 2737 1189 2737 4258; Fax: 011-2737 3643 / 6855;

E-mail: gupta7000@hotmail.com Web: www.ambicasteels.com

Architectural Division – JSL, Delhi

The Architectural Division launched by the Jindal Stainless Ltd has taken the initiative to promote stainless steel products and technology solutions to cater to the emerging market of stainless steel for architecture, building & construction (ABC) in India. A competent team of architects, product designers and engineers provide clients with a flexible and creative approach in achieving spectacular and unique design solutions. Innovative products with value added applications in household, corporate, industrial and hospitality segment are constantly being evolved. The division is fully geared to meet any of the specialized job requirements including all types of column-, wall- and roof cladding, handrails (customized / off-the-shelf), false ceiling, atriums (integrated and free standing), canopies, space frames, skylights, spider glazing, structural glazing, door and window frames, fences and boundary walls, wide range of street furniture, school / cafeteria furniture, lighting, signages and so forth.

The Division is very closely associated with the faculty and students of National Institute of Design, Ahmedabad to impart the technology and methods of fabrication of stainless steel. The state-of-the-art fabrication unit is located at Delhi, equipped with machines, like CNC laser cutting machine, CNC turret-punch machine, CNC hydraulic press brake etc, for fabrication and machining of speciality components in stainless steel. The Architectural Division is capable of providing a full range of technical support services including assistance during initial design complete drafting and engineering work, fabrication of quality material and finishes and job site supervision by trained personnel.

Office: Jindal Stainless Ltd, Architectural Division, B-3 / 17, Safdarjung Enclave, New Delhi – 110 029;

Tel: 011-5165 1338, 5165 1339; Fax: 011-5165 1337;

E-mail: jsb@jindalsteel.com Web: www.jindalstainless.com

Works: Jindal Stainless Ltd, Architectural Division, 28th km Stone, Rohtak Road, Tikri Kalan, Delhi.

Tel: 011-2835 2352 / 2353.

Corporate Office: Jindal Stainless Ltd, Architectural Division, Jindal Centre, 12 Bhikaiji Cama Place. New Delhi – 110 066; Tel: 011-2618 8345 / 8380; Fax: 011-2616 1271, 2617 0691.



Top: Benches and perforated sheets in AISI 316 grade at Walkeshwar, Mumbai. Above: Bus shelter in Bellary, Karnataka. It is modular in design and assembled at site.

Jyoti (India) Metal Industries Pvt Ltd, Mumbai

The company “Jyoti Industries” was started in 1985 to make quality stainless steel sinks under the brand name *Nirali*. By 1997, when the demand of *Nirali* brand began to rise, the company started its operations in a new factory at Palghar, Maharashtra. By the year 2000, Jyoti Industries was renamed as Jyoti (India) Metal Industries Pvt Ltd. The company which began with three standard models, now has twenty three models in fifty-four different sizes, while newer ones are constantly developed. The company is now the No.1 Indian sink manufacturer in India and is managed by its two Directors, Mr Navin Gada and Mr B R Gada.

Nirali brand sinks are not only supplied to neighbouring countries like Nepal and Sri Lanka but also to far off countries like Kenya and Vietnam and also to developed countries like the USA. and the UK who find their products praiseworthy. The company is also the largest supplier of kitchen sinks to the big Indian builders like Hiranandani's, Lokhandwala's, Raheja's and also to top industrial houses of the country like Reliance, Tatas and L&T. It is also a major supplier to the Indian railways. The company has been honoured by the Govt. of India with a Certificate of Appreciation. It possess over one thousand five hundred dealers all over India.

The 800 ton hydraulic press line is designed to produce sinks with perfect shape and contours, as well as providing it with a leveled shape. A fully automatic CNC machine cuts to length and tailors heavy duty stainless steel coils that undergo stringent quality check



before being processed. It also undertakes the process of flattening out the coils, which are then shaped by the hydraulic press line. The company also fabricates stainless steel wash basins and Indian-style toilet inlays.

Office: JYOTI (INDIA) METAL INDUSTRIES PVT LTD, Unit No. 210, Kalyandas Udyog Bhavan, 2nd floor, Sadanand Hasu Tandel Marg, Near Century Bazar, Worli, Mumbai 400 025; Tel: 022-2431 5500; Fax: 022-2436 2543; E-mail: nirali@nirali.com Web: www.niralisinks.com

Works: JYOTI (INDIA) METAL INDUSTRIES PVT LTD, Village Shelvali, Palghar – Manor Road, Palghar (East), Distt Thane – 401 404, Maharashtra; Tel: 02525-256 105, 256 106; Fax: 02525-254 024.

Rail Coach Factory, Kapurthala

Rail Coach Factory (RCF), Kapurthala is the most modern production unit of the Indian Railways, equipped with the latest infrastructure and technology available in the market. The foundation stone of the factory was laid on 17th August 1985. Manufacture of coaches was started on 19th September 1987 and the first coach was rolled out on 31st March 1988. After that there was no look back for RCF.

The state-of-the-art manufacturing facilities and processes have enabled RCF to achieve excellence in design, development, manufacture, installation and after-sales services of railway coaches with a view to ensure continued satisfaction of the rail customers. RCF has so far turned out more than 13,900 coaches. RCF has a strong tradition of innovations and developing new products. Many major developments on coaching stock such as AC-3 tier coaches, IRY / IR20 coaches, Self Propelled Accident Relief Train, High Capacity Parcel Vans, Postal Vans, Coaching Container Flats, Refrigerated Van, Inspection Carriages, Over Head Equipment Cars, MG-DMU etc., have taken place in RCF.

RCF is equipped with machinery and plant having specialized facilities like laser cutting, plasma cutting, robotized welding and spot welding facilities. Use of computer aided design and manufacturing has enabled RCF to adopt new coach manufacturing technology and successfully carry out the design and manufacture as per customer's requirements. Over 40 CNC machines, latest welding techniques, in-house manufacture of FRP components, jigs and fixtures, plant layout etc., not only facilitates efficient coach production, but also provides flexibility to manufacture different types of coaches at the same time.

In order to make quantum jump in passenger coach technology and to bring it to contemporary world standards, Indian Railways adopted the new design from ALSTHOM-LHB GmbH, Germany. RCF was entrusted with the task of developing and manufacture of most modern, high speed, state-of-the-art, stainless steel coaches. The key improvements of this new generation passenger coach and their influence on the performance cover important aspects of passenger comfort, safety, operation and life cycle costs. Coach shell super structure and trough floor is made of ferritic and austenitic stainless steel to eliminate incidence of corrosion, thereby reducing the maintenance cost. Coach weight is reduced through design innovations for lower hauling costs.

The FIAT bogie is an adoption of famous EUROFIMA design for improved ride comfort. Structurally superior Y-frame bogie construction, makes it lighter and yet stronger. It has been provided with improved primary and secondary suspension, axle mounted disc brake system, wheel slide protection, maintenance free cartridge roller bearings and hydraulic shock absorbers



making it more reliable and maintenance friendly.

The latest innovation of RCF is the manufacturing of first fire-proof coach of Indian railways. In a major departure from the design practices, new concepts have been incorporated like stainless steel seats, luggage racks and toilet inlays, PVC coated GI sheet for paneling of the compartment partition frame and ceiling.

RCF is already using stainless steel sheets in different thicknesses ranging from 1.25 mm to 3.15 mm in austenitic steel and 2 mm to 20 mm in ferritic steel. Trough floor of all types of coaches being manufactured at RCF is of austenitic stainless steel. Efforts are being made to manufacture complete stainless steel shell for EMU coaches and non-AC passenger coaches. RCF's design & development team is also exploring the possibility of using "rigidised stainless steel sheets" for compartment paneling of coaches.

The dedicated team at RCF is fully aware that increase in productivity and production is to be achieved while ensuring high quality standards and economical costs. Guided by this principle, RCF has already achieved ISO-9001 and ISO-14001 certification. RCF is confident that coaches produced in this factory, especially LHB coaches, can successfully compete with the coaches available in international market and that too at reasonable competitive cost.

Head Office: RAIL COACH FACTORY, Hussainpur, Kapurthala – 144 602, Punjab.



Bulk pickling of a process vessel.

Surface Innovators Pvt Ltd, Mumbai

M/s Surface Innovators, Pvt Ltd, Mumbai was promoted in the year 1992 by Mrs Anushree Kulkarni and Mr Anish Shah. Till then, the products for pickling and passivation were not giving the desired quality finish and most importantly were hazardous to the human life due to the fumes evolved during chemical reaction. This motivated them to promote the company and to provide a revolutionary pickling and passivation process to the stainless steel industry which is not health hazardous and also gives a uniform quality finish to the surface to match international standards.

After completion of nine years of operation, Surface Innovators has made a mark in the pickling and passivation industry and is catering to more than 12 industries in India and numerous companies. The company's product K-2 has been tested by the Indian Institute of Technology, Mumbai and certified to be complying with ASTM-A380 standard.

Surface Innovators has a young and promising team of marketing people and skilled labour. The company supplies chemicals and also equipment for safe in-house pickling and passivation for all types of job capacities. Some of their products and systems are: K-2 SSA inhibitor for bulk pickling on stainless steel, low nickel alloy and ferritic grades; C-2 a chelant passivation technique for stainless steel (a nitric acid-free passivation for food, dairy, beverage and pharma industries). The company has agents in Ahmedabad, Chennai, Delhi and Bangalore.

To continue the process of innovation and improvement, the company is backed by the experience of their R & D experts, collaborators and associates, who have supported them, to offer revolutionary products, meeting international quality standards.

Office: SURFACE INNOVATORS PVT LTD, 40 B, Dossa Compound, B / H Municipal Indl. Estate, Keshavrao Khadye Marg, Near Jacob Circle, 7 Rasta, Mahalaxmi, Mumbai – 400 011; Tel: 022 – 2300 5205, 2309 7759; Fax: 022 – 2300 5206; E-mail: surface@bom3.vsnl.net.in Web: www.surfaceinnovators.com

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Primary Members

Ambica Steels Ltd
Chandan Steel Ltd
Ferro Alloys Corporation Ltd
Haryana Steel & Alloys Ltd
Isibars Ltd
Ispat Industries Ltd
Jindal Stainless Ltd
Mukand Ltd
Rathi Ispat Ltd
Rimjhim Ispat Ltd
Panchmahal Steel Ltd
Shah Alloys Ltd
Stainless India Ltd
Steel Authority of India Ltd
(Alloy Steels Plant + Salem Steel Plant)
Viraj Alloys Ltd

Associate Members

AV Alloys Ltd
Ador Welding Ltd
Ampi Agencies Pvt Ltd
Apex Tubes Ltd
Arcelor Stainless India Pvt Ltd
Architectural Divn. – JSL
Arm Innovations
Bansal Wire Industries Ltd
Bhandari Foils Pvt Ltd
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Quality Foils Ltd
Raajratna Metal Industries Ltd
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Rail Coach Factory
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