ISSDA Celebrates its 20th Anniversary
CRU’s 12th World Stainless Steel Conference held in Mumbai

In a grand event held in Mumbai during 22-24th November 2009, ISSDA celebrated the 20th Anniversary of its founding (in November 1989). This celebration was combined with the 12th World Stainless Steel Conference of CRU (Commodities Research Unit), a London-based authority on worldwide commodities including stainless steel. The last time ISSDA partnered with CRU in holding a high-profile World Stainless Steel Conference in India was in Delhi in the year 2005.

During the celebrations, the role played by ISSDA in laying the foundations for continued prosperity of the stainless steel industry in India, and how it enabled the Indian stainless steel industry to be counted amongst the top countries of the world was highlighted. Important personalities from the Indian stainless steel industry were felicitated for their contributions (see photos).

Partnering of this event by CRU ensured the presence of over 300 high-profile Indian and overseas personalities from the industry. Several experts from around the world spoke on stainless steel markets and the raw material scenario in detail. They shared their views possible trends in prices and availability.
in the immediate future and mid-term, both at the global and regional levels.

As the host, ISSDA provided expert speakers on the Indian market, its near-term and future prospects, with emphasis on important growth areas like Architecture, Building and Construction and rail transportation sectors. The vibrancy of the Indian market and the very positive outlook of the Indian economy provided the audience, especially those from overseas, a welcome change from the gloomy prospects, especially in the western economies.

ISSDA thanks all its members and participants from around the world for the grand success of this programme. We thank speakers from many different countries who shared their experience and insights on regional and global stainless steel market scenario.

ISSDA places on record its gratitude to member companies who came forward to sponsor this important event in the life of our Association.

A cultural event by Rajasthani folk musicians enthralled everyone present at the Gala Dinner.

Continued on page 3
According to Mr. Markus A. Moll, Managing Director of the Austrian Market Research Company SMR, which provides market intelligence for the specialty steel industry, India is set to become the third largest stainless steel market in the world by the year 2014.

In his presentation to a large audience at Ahmedabad in January this year, he said that while China will continue to reign supreme in the world in the No. 1 spot for many years to come, India which was the 5th largest market in 2008 behind China, EU, Japan and USA, moved to the No. 4 spot in 2009.

On the basis of extensive study of worldwide markets, Mr. Moll expects that India will be ahead of both USA and Japan to move into the No. 3 spot in the year 2014, behind China and EU. In 2014, the total world market is expected to be over 39 million tonnes.

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Elegant Stainless Steel Spiral Staircase

M/s Tarini Engineering Private Limited, a Mumbai-based member company of ISSDA specialize in architectural design, fabrication and on-site erection. They have recently completed an elegant spiral staircase project at the Moksha Plaza located in Borivali, Mumbai, for M/s Sitara Builders (Rohan Group).

This spiral staircase, using 4.5 tonnes of 304/316 stainless steel in product forms such as spiders, trapezoidal and tubular sections and other fittings, was designed by Architects Vivek Bhole & Associates, Mumbai.

The main load-bearing step supports are spiral-shaped trapezoidal sections in stainless steel grade 304 of 5mm thickness. The glass is 24mm thick toughened multi-laminated with frosted film backing. The glass steps are held in position by spider fittings made of stainless steel grade 316. Special mounting arrangements were designed for the mounting of spider fittings on the support sections.

The mid-landing is also manufactured from 5mm thick stainless steel trapezoidal section and mounted on stainless steel pipe of 600mm diameter.

The handrails are in stainless steel grade 304, satin finish.

Detailed AutoCAD drawings were prepared prior to the manufacture of the sections. Templates of the curvature were manufactured by Laser cutting for matching the radius profile.

M/s Tarini Engineering completed the project in four months.

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Port Blair Airport Gets a Modern Look

Port Blair is the capital of Andaman & Nicobar Islands, a Union Territory of India. The look and feel of Port Blair Airport has changed drastically after the recent beautification project executed by Jindal Architecture Ltd (Arc). The old traditional look of the place still exists but in a modern perspective with the modern material stainless steel being used as the medium. The work done by Arc has not only given a face lift to the entire place, but also strengthened the infrastructure of the columns and passage-way and created convenience for airport staff and travelers. The place is adorned with beautiful stainless steel railings and column claddings in simple but modern designs. The interesting fact is that all this work had to be done without disrupting the existing set up like cladding the three side facing column where the groove had to be designed and fabricated to suit the layout of the column.

Port Blair is one of the latest airport projects done by Jindal Arc wherein a team of specialists, technical supervisors, design engineers etc were stationed for more than three months in Port Blair to ensure smooth execution of the project.

Apart from this, Arc has also successfully executed beautification and re-structuring works at almost all the major airports in India including Delhi, Mumbai, Hyderabad, Bangalore, Amritsar, Trivandrum, Jaipur and will be soon starting work in Chennai, Chandigarh, Varanasi, Dehradun and Indore airports, to name a few. Total area of stainless steel cladding of columns – 500 square meters; total length of railing – 600 running meters.

For details click www.jindalarc.in or mail to queries@arc.jindalsteel.com

Stainless Steel Graces Jharkhand

Protective railings for the National Games 2010

Stallion Infrastructure Pvt. Ltd, having their factories at Bangalore & Delhi have recently completed the prestigious assignment for Mega Sports Complex of National Games 2010 at Ranchi in Jharkhand. With this novel project, stainless steel has made its first major presence felt in Jharkhand and opened up a gateway for many more stainless steel applications.

The project was distributed over nine sports venues – Basketball, Badminton, Gymnastics, Aquatics, Cycling Track - Velodrome, Trap and Skit Shooting Range, Shooting Range, and Shooting Range 50 meters, where together 2,500 meters length of SS railings in 304 grade were installed.

A total of 20 tonnes of 304 grade Stainless Steel was utilized, under the watchful eyes of the Architects, as per their approved design. The entire project took only about six months to complete.

Contractors:
Stallion Infrastructure Pvt. Ltd
Website: stallionind.com
Email: info@stallionind.com
Contact: Ajay Shah - GM Projects (09350255891)
Energy-efficient Stainless Steel Cookware

Stainless steel is the preferred cookware material in Indian households and accounts for about 70% of total stainless steel usage in the country. Commercial kitchens in hotels, restaurants and fast-food outlets also use stainless steel extensively for cooking. Indian stainless steel cookware is exported to almost all countries of the world.

Indian households fully appreciate the need for stainless steel in order that the food they cook remains hygienic without contamination from the cookware material (all the grades used in India have been extensively tested for corrosion resistance in all food media and found not to impart any metallic element into the food being cooked), it is easily cleaned no matter how much you burn the food, and durable for decades in tip-top condition with pleasing appearance.

Stainless steel cookware in India and the world has seen quite a number of new design changes. Some were cosmetic changes to give new surface finishes to the cookware and tableware instead of the usual buffed finish. Many other design changes concentrated on improving thermal efficiency while cooking in order to reduce fuel consumption and cooking time.

Amongst the latter we can recall copper electroplated in the bottom; then came sandwich-bottoms with aluminium, again at the base of the cookware. But at all times, the food contact surface was always stainless steel. Aluminium and copper have much better heat absorption and transmission properties compared to 200 and 300 series stainless steels but they are no match for stainless steel when it comes to being in contact with food being cooked and delivering wholesome food.

A new design combining the best properties of stainless steel and thermally better performing copper/aluminium is now available elsewhere in the world and the techniques of manufacturing these can be made available by ISSDA to those who are interested.

**Cooking with LPG or electrical heating element**

Whether it is LPG cooking or cooking over an electrical heating element, the heat is not supplied uniformly to the bottom of the cookware. The image here shows uneven distribution of heat at the bottom.

**2-Ply Technology**

The use of copper or aluminium in the bottom helps even out the heat input. This is what we use in copper clad bottom or aluminium sandwich-bottom in our cookware these days. This method does not cover the sides of the cookware which leads to significant loss of the applied heat energy.

The new technology is to roll aluminium or copper sheets with stainless steel sheets and then cut circles out of them and form the cookware. The cookware has thermally better performing aluminium or copper on the outside and stainless steel on the inside. This ensures more effective and uniform distribution of heat in the entire cookware from the bottom to the top. This saves energy and time by efficiently transferring the maximum amount of heat available from the LPG or electrical or kerosene stove.

**Induction Cooking with 3-Ply technology**

We are now comfortable with the concept that electricity can be converted into microwaves which can cook or heat our food directly without losing energy to heat the surroundings or even the ceramic or glass container. Similarly, induction heating is a new way of converting electricity to heat. In induction heating, eddy currents are created in the ferromagnetic utensil and directly creating heat in the cookware without any loss to the surroundings. This is highly energy efficient heat transfer. In flame or electrical element heating, there is plenty of room for a good amount of the heat escaping into the surroundings.

In induction heating the cookware needs to be magnetic (i.e. be attracted by magnet). The 200 and 300 series stainless steels are not magnetic.

Hence, an outermost layer of Ferritic Grade stainless steel 430, which is fully magnetic, is used.

Like the earlier concept of 2-Ply technology, now we roll together three different materials; (1) An outer 430 grade stainless steel sheet for getting heated; (2) a middle layer of copper or aluminium sheet for thermally efficient transfer of heat to the innermost layer; (3) finally the 200 or 300 series stainless steel sheet for the inner food-contact area.

The three layers are rolled together, heated treated for improvement of properties then circles are cut and cookware made.

In experiments done over a period of time in residential environment, it has been found that cooking in 2 and 3-ply cookware over LPG gas stove take only about half the time taken for cooking similar quantities of rice or vegetables using an aluminium or sandwich bottom cookware. This is a great saving in fuel cost and TIME.

If you use a 3-ply even if you do not have an induction cook-top, the benefit is that you also have a stainless steel exterior which will be easy to clean and will look good for long periods of time.

Many induction-cooking units are available in the market for a reasonable price. If this is used, provided you have good electricity supply, then you can save even more energy.
3-Ply configuration in Induction cookware
Stainless steel- Aluminum/Copper – Stainless Steel all round

STAINLESS STEEL MODULAR TOILETS FOR INDIAN RAILWAYS (LHB/HYBRID COACHES)
THE SS MODULAR TOILET SYSTEM IS DESIGNED FOR BOTH INDIAN STYLE & WESTERN STYLE FOR LHB/HYBRID COACHES OF INDIAN RAILWAYS.

The module is fitted with all the accessories and lowered into the LHB coach from the roof. All the panels and visible surfaces have a powder coating in clear or blue with coating thickness of 80 microns. The powder coating will have a life-span of 5 - 7 yrs. Modular toilets have stain-free interiors and are aesthetically pleasing. Panels are of SS304 grade with 1.2 mm sheet thickness. Roof panels are of 1.2 mm sheet thickness backed by roof frame of 3 mm thick angles of stainless steel. The gross weight of the module is approx. 300 kgs.

The inlay tray is made of SS304 sheet, 2 mm thickness and has a slip-free epoxy coating in matching color. The inlay floor is sloped to minimize water accumulation. These modular toilets are easy to maintain. Water pipeline is also of stainless steel. None of the fittings or accessories will loosen during severe vibration conditions of a running train. Anticipated life of this modular toilet is approx. 20 years. All the toilet accessories are from branded suppliers. All panels have a non-metallic backing to reduce drumming.

For details click [www.jindalarc.in](http://www.jindalarc.in) or mail to queries@arc.jindalsteel.com
Stainless steel now comes with eco-friendly yet vibrant colours and superb textures. This decorative colour stainless steel strip can be used in a wide range of day-to-day products - from consumer electronics and computer peripherals right to architecture and automobile interiors.

**Sandvik Decorex** offers:
- Great decor yet retaining the traditional strength of steel
- Harder yet more formable and scratch-proof
- Surface finishes that allow engraving and etching
- Excellent adhesion and ductility
- Available in continuous coils
- Consistent colours and properties from coil to coil

Where looks and performance matter, Sandvik Decorex® colours up your world with the new colours of stainless steel. Fire up your imagination.
Ahead of the Commonwealth Games, New Delhi has 2,000 street signs with stainless steel structural support

In preparation for the Commonwealth Games to be held in Delhi in October this year, one of the initiatives taken by the New Delhi Municipal Corporation (NDMC) is to install more than 2,000 street signs with stainless steel structural support systems. These signs have been installed in all NDMC territory.

The structural supports for signage are made of SS 304 grade welded tubes. Apparently about 300 metric tonnes of stainless steel have been used in this project. The signage is on aluminium sheets using Retro Reflective films.

INDINOX 2010 Stainless Steel Fair held in Ahmedabad

INDINOX 2010 Stainless Steel Fair with 340 exhibitors was organized in Ahmedabad during January 16-19 this year. A variety of products in stainless steel were exhibited.

According to the organizers, the fair had a footfall of over 100,000 visitors during the four days. The Fair was inaugurated by Mr. Narendra Modi, Chief Minister of Gujarat. He exhorted the industry to diversify applications of stainless steels and promised his government’s fullest support for the growth and mushrooming of stainless steel fabrication units in Gujarat.

According to the organizers, about 52 overseas buyers visited the fair and were very happy with the business they transacted.
M/S FIRST METAL CORP
Established in 2007, First Metal Corp (FMC) is an indenting company engaged in Non-ferrous metals primarily. It represents Amalgamated Metals Trading (AMT, one of the Ring Dealing Members of the London Metal Exchange) and Tennant Metals Pty Ltd. (Australia) as their broker in India.
FMC currently is one of the major indenters of Non-ferrous metals in India

GEMS PRECISION CASTINGS PRIVATE LIMITED
GEMS PRECISION CASTINGS PRIVATE LIMITED is a steel castings manufacturing foundry located on Chennai - Bangalore Highway and is about 52 Km away from Chennai city. Chennai is one of the most industrialized places of India and is well connected to other parts of the country by road, rail, sea and air.

GEMS PRECISION CASTINGS PRIVATE LIMITED commenced commercial production in March, 2006 and is designed to a capacity of 150 Tons of castings per month. It produces carbon steel, alloy steel, stainless steel and manganese steel castings for a variety of applications such as valve, pump, earth moving, mining, petro chemical, sugar, cement, paper, railway and other general engineering applications.

GEMS PRECISION CASTINGS PRIVATE LIMITED has been set up by a group of professionals who are qualified and well experienced in the fields of ferrous foundry. Quality comes first in all activities of the Company and the Company has dedicated itself to provide its customers with timely delivery of quality castings at competitive prices.

GEMS PRECISION CASTINGS PRIVATE LIMITED has been certified ISO 9001:2000 Quality Management System by TUV Nord and Indian Boiler Regulations Known. It gives an overall picture about the various quality measures adopted to ensure right castings are produced first time and every time. It also serves the purpose of providing to customers and inspection agencies an assurance that quality is built into the castings. Though the Company produces castings for a wide variety of applications, it plans to focus on pressure containing castings for valve applications.

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**Import Category**
On the import front, Company is the importer of primary non-ferrous metals. The company is an authorized stockiest of **VALE INCO EUROPE LTD.**, London. The varied products included in import category are as follows:

**Nickel** - Brands
Inco of Canada, OMG of Finland, Tocantins of Brazil, Severo of Russia, Sumitomo of Japan, Xstrata of Norway.

**TIN** - Brand: MSC of Malaysia

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**M/S PHOENIX FOILS Pvt Ltd**
Phoenix Foils Pvt. Ltd., an ISO 9001:2000 company, is a precision roller of **Cold Rolled Stainless steel coils / foils** in various grades and sizes. Our unit is setup in Umbergaon, Gujarat, 150 Kms from the Mumbai main seaport.

Phoenix Foils has a strength of 100 highly trained and skilled manpower including qualified engineers and a team of technical professionals.

Manufacturing Facility:
1. Precision rolling mills to manufacture coils / foils upto a minimum thickness of 0.05mm
2. Annealing, Pickling and Bright annealing lines
3. Slitting lines and grinding machines
4. Complete in house testing facilities, tool room, etc.

Our Product Range:
**Cold Rolled Stainless steel coils / foils**

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**M/s SINGHAL PRODUCTS (I) Pvt Ltd**
We are a part of Singhal Group which is primarily involved in major fields related to stainless steel industry.

We are the sole & exclusive distributor of S.S. Flat for M/s JSL Ltd. [the largest producer of stainless steel in private sector] & also for M/s Electrotherm India Limited for complete Gujarat region. The work is carried out under following two companies:

M/s SRU Ltd.
We are also trading in S.S. Sheets, S.S. Plates & S.S. Coils from our Delhi office. Primarily dealing in material from JSL Ltd. & also imported material. The work is carried out under:

M/s Singhal Agencies
We are trading in stainless steel utensils and specializes in S.S. cookware [one of the largest consumed S.S. product world wide]. The major quantity gets exported to various countries across the globe primarily to U.S. & Europe. In the near future, we will be coming out with our own brand to cater to the needs of the domestic market. The Utensil trading division work is carried out under:

M/s Homezone Housewares
Also, in the near future, we will be entering into other manufacturing fields of stainless steel industry for which we are developing our land at Vapi-Silvassa in Gujarat.

We have our offices in Mumbai, Ahmedabad & Delhi from where all the above activities are controlled & managed.

**Contact Details:**
Mumbai : 022-24949800 / 66151716
Ahmedabad : 079-26562661 / 30029785
Delhi : 011-23233522 / 23238734

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**Zinc** - Brand: Special High Grade AZ Special High Grade of Australia
**Lead** - Brand: BROKEN HILL of Australia.

**8mm Copper Wire Rod – Brand:** MM Kembla Australia. The Company has Head office in Delhi and Branch at Faridabad. **Contact** : Mr Ajay Gupta, Director, M/s Metal Traders (India) Pvt Ltd, 685 Chowk Bara Tooti, Sadar Bazar, Delhi- 110 006. Tel : 91-11-2368 3271-76 e-mail: mtimli@gmail.com

**Thickness:**
From 3.00mm to 0.05mm Thick up to a maximum width of 365mm

**Surface finish and condition:**
2D, 2B, BA, CR

**Grades:**

**Applications:**
Our Coils / Foils are used in various applications such as Petrochemicals, Structured Packing, Random Packing, Solar Panels, Solar heaters, Nuclear applications, Heating elements, Submersible pumps, Bellows, Gaskets, Automobile components, Hydraulic Hoses, Armouring of Optic Fibre cables, Batteries, Pharmaceuticals, Hose Clamps, Hypothermic needles, Watch Straps, Pipes & Tubes, Utensils, general engineering, etc.

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**Nickel Magazine**

‘Nickel’ is a magazine devoted to nickel and its applications, published by the Nickel Institute. After 24 years of being published in print and sent free-of-charge to over 32,000 persons across the globe (including 3,500 in India), it has now gone online.

Those wishing to receive this valuable magazine, please register at:
www.nickelonline.org/subscribe to receive email notification of future issues.

You may also write to nissda@gmail.com.

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ISSDA was formed by the Indian stainless steel industry in 1989 to introduce and promote extensive use of stainless steel in industry sectors that were hitherto not using stainless steel.

When ISSDA was founded, the only known application of stainless steel, as far as the common man and even many engineers and architects were concerned, was kitchenware. There was no readymade roadmap for the creation of new markets for stainless steel in India. All we could display was the achievements in the West or in Japan. No one ever believed that India, which was very backward in the late 1980s and early 1990s, could even dream of such things.

Fortunately for us, Salem Steel Plant (SAIL) had wide cold-rolled sheets in production and in all earnestness they initiated and pursued the objective of introduction of stainless steel in Architecture and in the Railways. This came in extremely handy to pursue and broaden the good work SSP initiated by involving the entire industry.

We realized early on that the only way to change the situation was to change the mindset of those responsible for materials selection. Over the last 20 years, several hundred workshops, conferences, meetings, exhibitions and training programmes were held various parts of the country to create awareness about the benefits of using stainless steel amongst architects, engineers and designers. In-house or public conferences were held for the Army, Navy, airports, railway, CPWD, PWD and local municipality personnel across the country. Tonnes of free technical literature on stainless steel and its applications from the Nickel Institute were mailed across India. The quarterly magazine ‘STAINLESS INDIA’ which is being published since 1995 on a quarterly basis is sent free of charge to over 7,000 persons across India. Alongside, the handful of stainless steel fabricators were encouraged, provided technical support, and helped in getting prestigious projects.

We feel that ISSDA’s biggest accomplishment is the CHANGE OF MINDSET ABOUT STAINLESS STEEL IN INDIA. Once this is accomplished, the rest, as they say, is history. This awareness creation goes on.

Stainless steel production in India in 1989 was barely 2 lac tonnes. In this year, the transportation sector alone would be using 2 lac tonnes out of a total indigenous production of over 2 million tonnes.

Now we have some good fabrication units to cater to both the architectural sector and also to the railways. But the numbers we have is very insignificant compared to the size and the potential requirement of the country. Newspapers herald that Mercedes and BMW are moving to the Class II and Class III cities. If the stainless steel market is to grow, that is the direction in which we have also to go.

But the limiting factor is the existence of a significant number of good quality fabricators to cater to these demands. Once you start supplying the non-metro markets, there is no limit.

Looking at the mass enthusiasm and eagerness of visitors and exhibitors at INDINOX 2010, we feel that this would be an appropriate time to reiterate and make known to a larger audience that ISSDA’s technical support and assistance in establishing quality fabrication facilities IS ALWAYS AVAILABLE FOR THOSE WHO NEED. ISSDA would be happy to provide technical lecture and hands-on training in quality fabrication to groups of entrepreneurs anywhere in India.

You can also get technical publications on various subjects (www.nickelinstitute.org) and answers to your technical queries by writing to nissda@gmail.com. Websites of sister SSDAs around the world can be reached from www.stainlessindia.org for more knowledge.

In addition, we are also pleased to inform our readers that the services of an experienced project consultant can be arranged for those who want to venture into high quality stainless steel fabrication of any product to cater to this growing market. If interested, please write to nissda@gmail.com.

Project consultants with experience and expertise in putting up units for fabrication of stainless steel products for the architectural or transportation sector with a track record of successful projects can present their credentials and be registered with ISSDA for referral.

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Publish Articles in this Magazine
If you have any worthwhile new product or service, a news item, or bagged a prestigious project, or won an award, you are most welcome to publish it in the pages of ‘Stainless India’. A high density image to accompany the write up would be appreciated. The only condition is, it should be related to stainless steel and verifiable.

This service is available to all, even if you are presently not a member of ISSDA. There is no charge for this opportunity. Over 7,000 copies are distributed to end-user sectors and the stainless industry in India and overseas.

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Technical Services from ISSDA
If you have questions regarding grade selection, fabrication or failures in service, please write to nissda@gmail.com. A good number of end-users and fabricators use our services which are free of charge. ISSDA is the storehouse of authentic technical information on stainless steels. We have technical back-up support from raw materials associations of Nickel, Chromium and Molybdenum and close working relationships with a large number of Stainless Steel Development Associations around the world who freely share their knowledge with ISSDA.