

STAINLESS INDIA

A MAGAZINE PUBLISHED BY

**Indian Stainless Steel
Development Association**

K-36 (FF), Hauz Khas Enclave, New Delhi - 110 016.



Tel: 2686 5631 / 3389; Fax: +91 11 2686 3376

E-mail: nissda@gmail.comnidissda@del3.vsnl.net.inWeb: www.stainlessindia.org

VOL. 12 NO.3

Published four times a year

MARCH 2007

DMRC Looks for 400 More All-Stainless Coaches

Mumbai, Bangalore, Hyderabad and Chennai also on the move



Delhi Metro Rail Corporation (DMRC) has been providing a world-class traveling experience to citizens of New Delhi for nearly four years. Sixty train sets, each consisting of four coaches, presently operate on DMRC's Phase-I network serving about five lakh commuters everyday.

Another 100 train sets, each with four coaches, will be added to the DMRC system for Phase-II to be completed by 2010. These coaches will have several additional features that will make them more commuter-friendly. All coaches are made of nickel-containing stainless steel in 300 series, including seats, handles etc. Each uses about 12 tonnes of stainless steel.

All the coaches are being planned to be equipped with closed-circuit cameras with a monitor installed in the train operator's cab. This will help the train operators monitor passenger activities inside the trains.

The air-conditioning of the trains will also be made more efficient. The temperature inside the coaches will be maintained at 25 degree Celsius even when the ambient temperature outside is 44 degrees Celsius. At present, the temperature inside coaches is maintained at 27 to 29 degree Celsius.

Mumbai, Bangalore, Hyderabad and Chennai are in the process of acquiring their own metros similar to the Delhi Metro's all-stainless steel coaches for their convenience and safety.

Mumbai

Work is underway in Mumbai for a Delhi Metro like system with elevated and underground corridors. Phase-I of the project in Mumbai will cover 62.68 km to be completed by 2011. Mumbai Metro is on the lookout for 64 stainless steel EMUs for Phase-I of Mumbai Metro.

Bangalore

Bangalore will also have a Metro Rail of its own! And the people of Bangalore can soon look forward to traveling in the fast lane. Metro Rail will start chugging in the city from 2009. Section-I of first phase of Bangalore Metro Construction work is expected to be completed by December, 2009. The full network of 33 km. DC electrified, third rail (not overhead), double track in Phase-I is expected to be commissioned by September, 2011. A tender has been put out for 100 Delhi-type Metro coaches.

Hyderabad

The Andhra Cabinet has already approved Rs. 8,760 Crore for Hyderabad Metro Rail project. The total distance covered under this project will be 66 km. Civil works for this project will begin in June 2007.

Chennai

The Tamil Nadu Government is in the process of finalizing Metro Rail project for Chennai.

World Production of Stainless Steel Surges by 16.7% in 2006

Compared to the 1% decline in world stainless production in 2005 over 2004, the figure jumped up by 16.7% in 2006 compared to 2005. The 2006 production was a record 28.359 million tonnes compared to 24.319 million tonnes in 2005.

It can be noted from the adjoining table that China in particular and Asia in general is the powerhouse of stainless production. China surged by 33% in 2005 and 67.7% in 2006, emerging as the largest stainless steel producing country in the world. China produced 5.299 million tonnes relegating Japan to the second place at 4.073 million tonnes. These two Asian countries alone produced more than all of the European Union in 2006.

India exhibited a consistent but moderate growth at 10.6% and 9.7% for 2005 and 2006 respectively.

Stainless and Heat Resisting Steel Crude Steel Production (ingot/Slab Equivalent) (Data courtesy : International Stainless Steel Forum)

	Year 2005 in '000 metric tonnes		Year 2006 in '000 metric tonnes	
Country Region	Year to date	% change Y-O-Y	Year to date	% change Y-O-Y
EU 15	8,259	-5.0	9,245	12.3
USA	2,238	-6.6	2,460	9.4
Brazil	450	-9.5	491	9.2
Japan	3,983	-5.1	4,073	2.3
Korea	2,292	-1.9	2,278	-0.6
Taiwan, China	1,514	-5.4	1,724	13.8
China	3,160	33.8	5,299	67.7
India	1,549	10.6	1,700	9.7
Others(1)	875	-18.8	1,090	25.9
World	24,319	-1.0	28,359	16.7

These are provisional figures

(1) Czech Republic, Slovenia, Poland, Russia, Ukraine, Canada, Cuba, South Africa.

The Motorcycle Show Shines With Stainless Steel Reflections

In the motorbike industry, stainless steel has been used for many years in the manufacture of exhaust pipes, but for the first time ever, at the EICMA 2006 (Motorcycle Show) in Milan, stainless steel stars also as a structural material.

The CRC, Cagiva Research Centre, in San Marino, in conjunction with Centro Inox, has in fact developed a new frame that goes by the name of AIF (Aluminum Inox Frame) made of AISI 304 (EN 1,4301) stainless steel and aluminium alloy, characterized by a patented system for the continuous adjustment of the motorbike set-up, in this case a supermotard, the STR 650 CRC.

It is fitted with a single-cylinder, 4-stroke, liquid-cooled engine and features an extremely innovative design, presented under the Husqvarna brand in a world preview at the EICMA 2006.

The stainless steel (in the form of seamless and welded tube, sheet and bars) captivated the attention of visitors to the motorcycle show not only for its mechanical characteristics but also for its aesthetic appeal (brushed finish).

The welds in the area of the steering sleeve are clear to see and the joint proves to be an aesthetic attraction, which would not be possible with



traditional painted steels.

From a structural viewpoint, the road tests and other testing (such as the fatigue test) have confirmed the undoubted performance capacity of stainless steel.

For the supply of stainless steel products required to fit out the prototypes, we would like to thank : Marcegaglia div. Inox for the welded tubes, Mannesmann DMV Stainless Italia for the seamless tube, ThyssenKrupp Acciai Speciali Terni for the sheet steel and Acciaierie Valbruna for the bars.

From Inossidabile 166 – Centro Inox, Milan

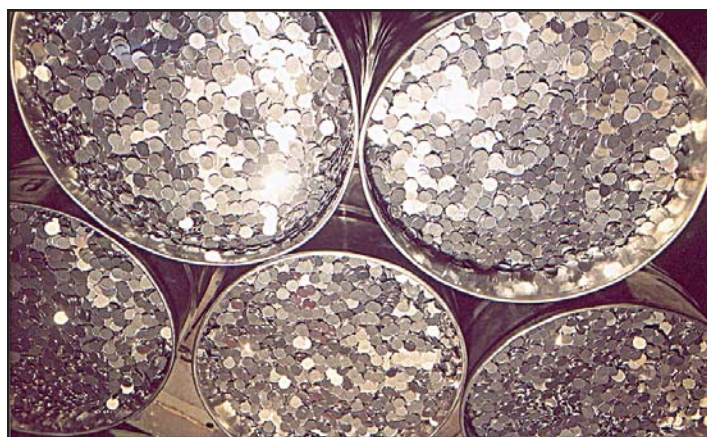
SSP and JSL Bag Mint Orders



Coin Blanks



Blank rimming machine at SSP



It may be noted that the intrinsic value of a coin should be less than the face value. To meet this basic requirement, the present cupronickel coins (75% copper, 25% nickel) of Rs. 2 and Rs. 5 denomination are being phased out and being replaced by ferritic stainless steel coinage. They would have a similar look as the Re. 1, 50p and 25p coins.

The other important requirements of coinage material are corrosion resistance, no change in colour even after years of use, ability to give a clear relief to the impression on the coin-face and wear resistance. Ferritic stainless steel meets all these requirements and is an ideal coinage material. In some instance, the physical properties of the coin material like magnetism play an important role, as in vending machines. Cupronickel coins are non-magnetic whereas the ferritic coins would be ferromagnetic.

Metals like gold, silver and copper have been used for coinage for ages. Long before nickel was identified as an element (in 1751 by Swedish scientist Axel Cronstedt), nickel was part of coinage: the ancient Chinese alloy 'paitung' was a coinage material of nickel, copper and zinc. Cupronickel coinage (75-25) is today the single most common alloy of nickel for coinage in the world today.

Historically, ferritic stainless steel coins were introduced in Italy after the First World War. They have a bluish-white colour, which is pleasing and acceptable. Presently several countries of the world are using ferritic stainless steel coins. The Government of India took the decision to go in for ferritic stainless steel coins in 1986.

- Editor

Salem Stainless Shines

Salem Steel Plant (SSP) of the Steel Authority of India Ltd (SAIL) has bagged an order for supply of 11,300 tonnes of ferritic stainless steel strips to the Government of India Mint at Kolkata. The strips, to be used for minting coins, will be supplied in grade 430 in two widths and thicknesses, as specified by the Mint. SSP will supply the first lot of the Rs. 117-crore order in March 2007.

SSP, in collaboration with the Government of India Mints, pioneered the use of stainless steel coinage in the country. The Tamil Nadu-based plant produces both coin blanks and stainless steel coils/strips for coinage purposes. During April-December of the current financial year, stainless steel production by SSP touched 64,000 tonnes, an increase of around 30% over the corresponding period last year.

SAIL is presently expanding SSP's production capacity at an estimated cost of Rs. 1,553 crore as part of its own Corporate Plan 2010. M.N. Dastur & Company (P) Ltd of Kolkata has been appointed as the consultant-cum-project manager for the plant's expansion scheme. Under the plan, new steel melting and continuous casting facilities will be installed to enable the plant to produce 180,000 tonnes per annum (tpa) of stainless steel slabs. The capacity of SSP's existing Cold Rolling Complex will also be expanded to hike production of cold-rolled stainless steel to 146,000 tpa.

Jindal Stainless Limited

The Indian mint manufactures coins for the Government of India (GOI). The mints in various locations have been making Rs. 2 & Rs. 5 coins from 75/25 cupronickel, which have been in circulation for quite a few years.

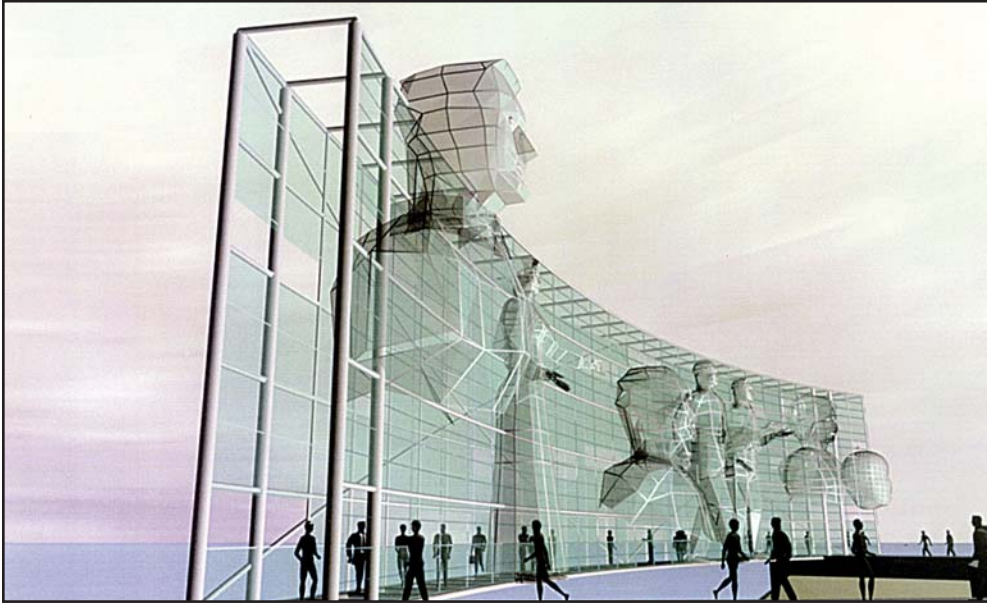
In view of the sudden spurt in the prices of copper and nickel, the Government of India is now planning to change the coinage material of Rs. 2 & Rs. 5 coins from cupronickel to ferritic stainless steel. The grade of ferritic stainless steel chosen is type 430 (Cr 16-18%). At current prices, weight for weight, cupronickel costs much more than 430. Hence, the decision to switch from cupronickel to ferritic stainless steels for 2 and 5 rupee coins. At present the 25p, 50p and Re 1 coins are in ferritic stainless steel.

GOI had come out with tender of approximately 26,000 MT for 430 sheets and out of this JSL has been awarded 14,000 MT. JSL had earlier also supplied the similar material to GOI mint. Besides this, JSL is also supplying coinage material to European and Asian countries.

JSL is having its state of art blanking line and is doing blanking jobs for ferrous and non-ferrous metals. In India, the demand of coinage is yet to see an exponential growth. The vending machine culture is yet to arrive like in Europe and other developed countries.

Jindal's Stainless Innovation Awards

In order to encourage creativity in the usage of stainless steel and celebrate design excellence, Jindal Stainless Ltd has announced the fourth edition of Stainless Innovation Awards. The awards aim to support, and provide a platform for new talent, to recognize innovation, and elevate the level of thought and application of stainless steel. The awards created a huge amount of enthusiasm, especially among the student category. The entries that came in huge numbers were all par excellence and very innovative. More than 500 entries were received from practicing professionals and students from all over India in the form of Concept and Design ideas using stainless steel. For lack of space, only the winner of category - Innovation in application of stainless steel in Building and Architecture is being featured here.



Winner's Name : Kirtisagar Bollar
Application Details : 'Crysteel Reflections', an architectural installation built in stainless steel and glass, is a tribute to our freedom fighters and nation builders of India. Created using advanced digital and construction technologies, it's an attempt to reach out and inspire today's generation as well as to display India's technological potential and futuristic vision it holds for its people.

Stainless Steel Fabrication Training at RCF Kapurthala

At the invitation of the Rail Coach Factory, Kapurthala, ISSDA held a 2-day training session for the management and workers there. The faculty consisted of Mr. Ramesh R. Gopal, ED of ISSDA, Mr. V R Ramesh of Weldtech Engineers, a welding specialist based in Bangalore and Mr. Ajay Madan of Arm Innovations, a member company of ISSDA and a specialist in surface finishing of stainless steel.

While grade selection matters were discussed earlier with the railways, the focus of the training was to help the supervisory staff and workers on the correct practices for storing, handling, joining

and finishing stainless steel coaches.

About 100 engineers, including the General Manager and senior officers were present. A separate group of about 80 workers attended the sessions and demonstrations over two days.

The Indian Railways are seriously considering replacing 409M in the current LHB design with bare austenitic stainless steel. The bare stainless steel would not only improve the aesthetics (like Delhi Metro coaches for instance) but also eliminate the need to paint the coaches every few years.



Ramesh R. Gopal, E.D, ISSDA



V R Ramesh, Weldtech Engineers addressing

No sight – No problem! Excellent Fabrication Assured



M/s Kaushal Engineers, member of ISSDA and fabricator of different types of items for the architecture, building & construction sector and furniture in stainless steel, mild steel, brass, copper, etc.

Mr. G.S. Rathore, Director of M/s Kaushal Engineers and his wife Mrs. Prem Kumari Rathore are very sympathetic towards the less fortunate people in the society. They always wanted to help / do something for these people. To achieve this social cause, they decided to train visually challenged people in the field of stainless steel fabrication.

With this idea, in June 2006, they contacted the Blind Relief Association, New Delhi and picked six visually challenged people, in the age group of 25 – 35 years. These six young men had passed one year training from Industrial Training Institute under the Blind Relief Association. These visually challenged persons bring into play their heightened senses like feel, hearing, smell etc. to overcome the challenge of not being able to see the work piece. This helps them to come out with excellence and consistency in everything they do.

In addition, their sense of sincerity, loyalty, punctuality and efficiency

is unmatched by those workers who take sight for granted. There has been an instance, when a sighted worker left his job at Kaushal Engineers because he was no match for the visually challenged.

Can you touch a currency note blind-folded and correctly state the denomination? You bet, you cannot. The visually challenged do it all the time. This is the difference!

After 8-9 months of training at Kaushal Engineers these six visually challenged persons have become experts in fabrication mainly hammering and also very good at drilling, pipe cutting and surface finishing, work on power press etc.

An image of the work executed by the visually challenged workers at Kaushal Engineers is illustrated.

M/s Kaushal Engineers
18A, Gaushala Road, Satbari, Near Tania Farm,
Chhatarpur Ext., New Delhi – 110 030,
Tele-fax : 011-2630 2606 ;
Email : rathore@kaushalengineers.com; rathore@rathoreg.com
Web : www.kaushalengineers.com ; www.rathoreg.com

Have Problem creating Brush Finish on Pre-finished Stainless?

One step operation is available now for fabricators of stainless steel. Fabricators involved in manufacturing Refrigerated Chambers, Kitchen Equipment, Claddings of Walls, Lift Panels can be greatly benefited from this product.

While fabricating products for such aesthetic applications, fabricators generally use pre-finished sheets. However, during fabrication marks of bending, welding and other processes occur. It is usually difficult to remove such defects and blend the area to its original finish.

This product GUM WHEEL, offers easy to use option in such applications. With pre-grinding already done, it is possible to achieve the desired results in one operation.

This product is available in the following sizes:

90mm Dia x 100mm Width and
90mm Dia x 50mm Width. And it comes in Grit 60 and 180.

For details contact:

Mr. Ajay Madan
M/s Arm Innovations
23-B, Sector 31, HSIDC
Industrial Estate,
Faridabad 121 003
Telefax: 0129-4048900;
Mobile : 98111 37745
Email: ajay@arminnovations.com



With major investments like heat exchangers, a trustworthy supplier is essential. Correct specification will mean troublefree operation, low maintenance costs and a minimum of downtime. Avoid faceless companies – deal with Sandvik Materials Technology!

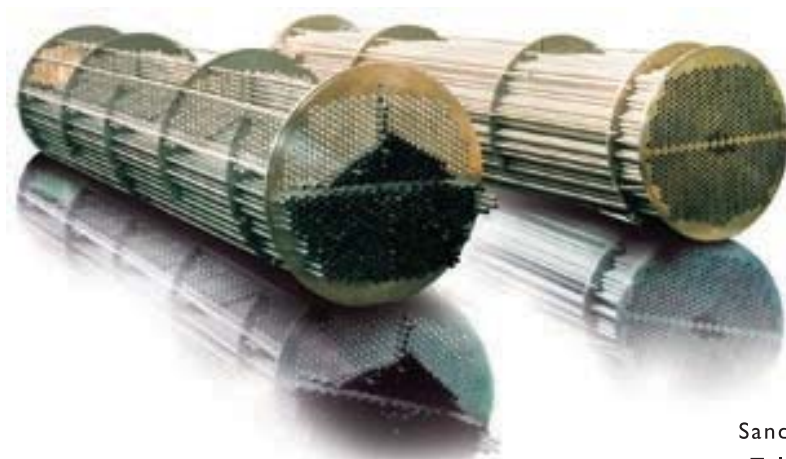
We offer a complete range of heat exchanger tubing, from standard grade stainless steels, high-alloyed austenitics, duplex and super duplex to titanium and zirconium.

THE RELIABLE PARTNER
FOR COMPETITIVE SOLUTIONS



Interfacing. With us – it's personal.

Perhaps you've already met?
Tony and his colleagues visit
end-users and fabricators
worldwide to interface on
process conditions, material
solutions and availability.



Sandvik Materials Technology

Sandvik Asia Ltd, Mumbai-Pune Road, Pune - 411012

Tel.: 020-27104563, Fax. 020-27145022, 27145339

E-mail: steel.india@sandvik.com Website: www.smt.sandvik.com/in

Progress in Standardization of 200 Series

The chemistries of the three grades agreed by the BIS sub-committee are:

Grade	C	Mn	Cr	Ni	Si	P	S	N	Cu	YS 0.2% offset		UTS		% Elongation GL=50 mm (Min)
										Min	Mpa	Min	Mpa	
1	0.12 max	8.5- 10.5	15.0 16.5	1.0- 2.0	0.75 max	0.08 max	0.03 max	0.20 max	1.5- 2.5	345		650		40
2	0.09 max	6.0- 8.0	16.0- 18.0	4.0- 6.0	0.75 max	0.06 max	0.03 max	0.15 max	1.5- 2.5	275		600		40
3	0.10 max	6.5- 9.0	16.0 17.5	1.5- 3.5	1.0 max	0.06 max	0.03 max	0.10- 0.25	2.0- 4.0	310		650		40

ISSDA is pleased to inform that we have received reports for the mechanical and chemistry tests conducted at TCR Engineering, Mumbai, on the 200 series samples given to them by us (supplied by JSL and SSP).

The Report of the tests conducted by TCR for chemistry and mechanical properties shows that all the parameters of all the samples are within the limits defined during the First Meeting of the MTD-16 Sub-Committee on low nickel stainless steels for utensils (given above).

For the all-important tests in food media (leaching of metallic ions and corrosion) to be conducted at Central Food Technological Research Institute (CFTRI), Mysore, the preparation of samples and utensils have already started under the supervision of Mr. Ananthanarayanan. After all the samples are ready, these would be sent to CFTRI, Mysore, to reach them before the middle of April this year. CFTRI tests are expected to start shortly after that.



Escalator Business in India, Stairway to Heaven

With the boom of malls across the country, the escalator business is touching new heights. In 2006-07, the escalator industry did a whopping Rs. 400-crore businesses in India, selling about 2,000 escalators. Escalator manufacturers get 50% of their business from malls with the rest coming from airports, hotels, railway stations and convention centers. It is expected that another 500 malls will become operational and around 4,000 escalators would be required over the next two years to meet this demand.

Stainless steel is used extensively for elevators, including the cladding on the sides and bottom. The preference for stainless steel is dictated by its pleasing aesthetics, ease of maintenance and durability.

Another important customer is the Delhi Metro Rail Corporation Limited (DMRC) which is committed to provide the highest standards of comfort and safety to each passenger. With this in view, DMRC has already installed escalators in a majority of 59 stations completed in Phase I. DMRC system for Phase – II is already under construction and will be completed by 2010. In Phase-II, there will be approximately 100 new stations. This will bring additional business for escalator manufacturers.

After the success of DMRC in Delhi, now other major cities like Mumbai, Ahmedabad, Chennai, Hyderabad, Bangalore and Cochin are also planning to have Metro Rails similar to the Delhi Metro.

Since the beginning of modernisation of airports, the escalator business from this sector is also growing. In next couple of years, an additional 40 new/refurbished airports will come up in the country.

Not to be left behind are the railway stations of the Indian Railways.

Some 500 major stations will be refurbished soon, to world class passenger facilities to look something the malls that are booming.

The hospitality sector is also reviving up its act to cater to increasing tourism both by Indians and foreigners. Leading hotel chains plan to pump in Rs 4,500 crore in two years. About 6,500 additional rooms are to be made available in two years.

All these developments must be very sweet music to the ears of the escalator and elevator industry. OTIS, Kone, Schindler, Thyssen and Johnson are the leading manufactures of escalators and elevators.

Would you like to feature your stainless steel products / services in STAINLESS INDIA? Send us your write-up along with attractive colour images.

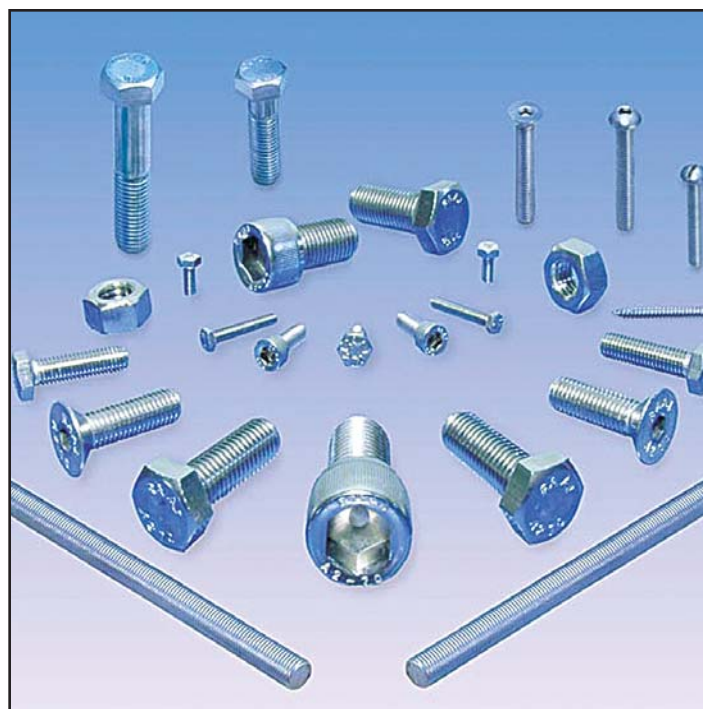
DISCLAIMER

Drawings / photographs of equipment, machinery, products and services in STAINLESS INDIA are for illustrative purposes only and their inclusion does not constitute or imply any endorsement, of the items or the companies that manufacture or distribute them, by ISSDA and its staff.

SS 304 / 316 Nuts, Bolts & Screws

RAAJRATNA FASTENERS PVT LTD. is a group company of M/s Raajratna Metal Industries Ltd. having turnover of Rs.500 Crore renowned for manufacturing Stainless Steel Wires, Bright Bars, Welding Consumables and Coil/Strips. We have established brand new production facilities in year 2005 to manufacture high quality stainless steel fasteners in grade SS 304 & 316. We have installed new multi station bolt and nut formers to produce good and consistent quality product with high productivity. We have in house large wire drawing capacity that ensures good quality raw material with timely delivery. We ensure quality of our product with line inspection at each and every stage of production. In a short time we have already established good customer base in India as well as in the European countries, Middle East and USA. Our product acceptance is based on our quality of product, timely delivery and services. We produce fasteners in accordance with the DIN, ISO, ANSI/ASTM, IS and other international standards. We also manufacture product as per the customer's drawing and specification. Our products are marked with our brand name "RAAJ" and material grade.

Manufacturing Stainless Steel 304 & 316 DIN 933 Hex Screws, DIN 934 Hex Nut, DIN 912 Allen Cap Screws, DIN 7991 Allen CSK Screws, DIN 975 / 976 Full Threaded Bar and All types Self Tapping and Machine Screws. We follow Mechanical Properties Standard DIN 267 Part 11 / ISO 3506.



Manufacturing Range

Hex Head Bolts, SHCS & Full Threaded Rods / Studs

Material Grade	A2-70, A4-70, A2-80, A4-80
Size Range	M4 to M16 i.e. (M4, M5, M6, M8, M10, M12, M16)
Length	Any length from 10mm to 150mm depending on the diameter of fasteners.
Standard	DIN 933 Hex Screws, ISO 4017, IS 1364 Part -2, BS 1083 - 1965 DIN 912 (Allen Socket Screws) OR Allen Cap Screws DIN 603 (Square Neck Bolts/Screws)

Hex Nuts

Material Grade	A2-70, A4-70
Size Range:	M4 to M12 i.e (M5, M6, M8, M10, M12)
Standard	DIN 934, ISO 4032, IS 1364 Part 3, BS 1083 – 1965

Full Threaded Bar

Material Grade	A2, A4, A2-80, A4-80, B8 (Class 1 & 2), B8M (Class 1 & 2)
Size Range	From M3 to M24 or 1/4" to 1"
Length	1 to 6 mtr, 3' to 12' OR any special length.
Thread type	Metric (DIN 13-15 & ANSI B1.13M), UNC (ANSI B1.1), BSW
Standard	DIN 975/976 OR ASTM A193 / A320

Machine & Self Tapping Screws

Material Grade	A2-70, A4-70
Size Range	M3 TO M10
Length	Up to 50mm
Drive	Phillip, Pozzi Drive, Slotted
Standard	DIN 7971 / 72 / 73 / 81/ 82/ 83 (Self-tapping Screws) DIN 7991 (Socket CSK Screws) DIN 84,963,964,965,966 and 7985 (Machined Screws)

M/s Raajratna Fasteners Pvt Ltd.,
804, Sakar-III, Near Income Tax,
Opp. Old High Court, Ahmedabad-380 014,
Gujarat, INDIA
Tel : (079) 27543681/2/3/4,
Fax : (079) 27541099
Email: domestic@raajfasteners.com
Website: <http://www.raajfasteners.com>

ABC Workshop CD Now Available!

ISSDA and the Nickel Institute (NI) conducted a series of one-day workshops on the applications of stainless steel for Architecture, Building & Construction (ABC) sector in November / December 2006.

Presentations were made by Ms. Catherine Houska, a consultant to the Nickel Institute and a respected international expert on the use of stainless steel for the ABC Sector. Subjects covered include: Sustainability, Grade Selection, Design Basics, Maintenance, Finishes, Fabrication, Interior Applications, Building Exteriors, Roofing, Structural Applications and Street Furniture.

All the abovementioned Ppt presentations in the pdf format are recorded in the CD. Along with this, another CD containing all important publications of the Nickel Institute on this subject is also available. The two CDs, in a pack, are available at Rs. 500 inclusive of handling and courier charges.

If interested, please send a cheque for Rs. 500 in favour of 'Indian Stainless Steel Development Association' to our address.

Welcoming New Members



Valley Iron & Steel Co. Ltd.

At VISCO, imagination is the driving force, the fountainhead, that propels the Organisation to surge ahead, exploring new critical spaces in making Stainless Steel catering to ever changing needs of the new-age customer.

An over Rs. 3,000 million Indian transnational recognised as one of India's fastest-growing R & D based Stainless Steel conglomerate, VISCO have imprinted an indelible mark in the Stainless Steel scenario of the Country. VISCO has been hailed as one of the most sensational brand launch of the Year 2003. In recent times, the VISCO'S portfolio has extended its product net to acquire the largest share in Stainless Steel. VISCO has drawn its corporate planning to become the world's largest Stainless Steel manufacturing company, as India has capability to produce the largest quantity of Stainless Steel in the world. Leveraging cost advantages VISCO'S state-of-the-art manufacturing facilities offer a customised base for global association for manufacturing and research support.

Today the company is a multi-diverse, multi-product enterprises, setting new standards of excellence in stainless steel manufacturing, productivity enhancement as well as value added products.

VISCO is equipped with State of Art Ultra High Electric Arc Furnace, Induction Furnace, AOD, LRF, Concast Machine and one of the most Modern Hot Rolling Mills.

Presently VISCO manufactures a wide range of Product Mix in the form of Billets & Flats of various series comprises 200, 300 & 400, a combination of the product capable to produce Catering Equipments, Pipes and allied products for Industrial, Automobile and Construction uses.

VISCO has grown at a very healthy pace indeed, ever since commencement of commercial production. From a turnover of Rs. 773.9 million and a Profit of Rs. 8.49 million as the first milestone in 2004 to a turnover of Rs.3020 million in 2007, with an ambitious target of achieving a sale of Rs. 10 billion and a profit of Rs. 500 million by the end of 2009 AD.



22" Mill Rolling Stainless Steel Flats



Liquid Stainless Steel is being transferred from induction furnace to AOD

M/s. Valley Iron & Steel Co. Ltd
Exchange Store Building, Sham Nath Marg
Civil Lines, Delhi 110 054
Tel: 011-2391 9000, 2391 9043-49
Fax: 011-2391 9051, Email: viscodelhi@gmail.com

Anand Arc Electrodes Pvt Ltd

Anand Arc Electrodes Pvt. Ltd. Established in 1987 a DNV certified ISO 9001:2000 company, manufacturer of various types / grades of Welding consumable, has started production of stainless steel wires in the range of 0.8 to 5 mm for various applications.

The company having state-of-the-art modern world-class manufacturing facilities at Palghar, industrial suburb of Thane including sophisticated Chemical and Physical laboratory for testing, a well laid out process line from the Raw Material stage to the finished product. Each product is tested as per customer specifications.

Product Range

- Core Wire for Welding Electrodes.
- S.S. MIG / TIG Wires.
- Stainless Steel submerged Arc Wires & fluxes.
- Wires for springs, Fasteners, Scrubbers, Kitchenware, Basket etc.
- The above wires are available in 304L, 308L, ER309, ER310, 316L, ER312, ER347, 430L, ER2209, ER309LMO etc.

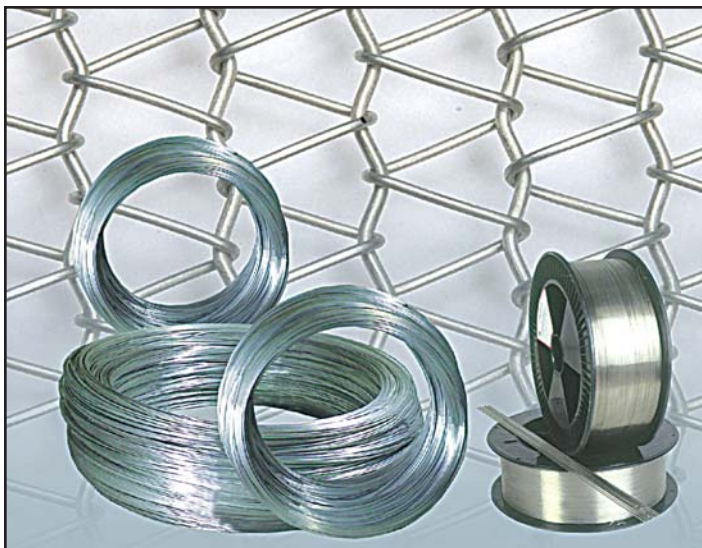
Welding Consumables

- Filler wires Viz., ER70S2, ER80SB2, ER90SB3. etc.
- S.S. & M.S. Welding Electrodes.
- Co2 Welding Wires (ER 70S6, ER90SG. Etc.)
- Submerged Arc Welding Wires (EL8, EM12K, EH14, EA3, EA2. etc) & Fluxes.

Approvals

Our products have a large numbers of approvals from all leading international inspecting agencies / consultants such as LRS, BV, ABS, DNV etc.

Our products have been extensively used in major projects viz, LOCC Paradip, Reliance, Essar Steel, NPC, BPCL, CPCL etc. Further, our electrodes and CO2 wires have been approved by BALCO for their Smelter and Power Plant Expansion at Korba and contractors like L&T Gannon Dunkerly Ltd., McNally Bharat Engineers Co. Ltd. Our Copper Coated Co2/MIG Wires have been approved by RDSO for use in the Indian Railways.



The company has highly qualified professionals working as a team towards maintaining company's reputation for quality product, prompt delivery and customer care.

M/s Anand Arc Electrodes Pvt Ltd, 30, Kala Udyog Premises, L.B.S.

Marg, Bhandup (W), Mumbai – 400 078, India,
Tel : 022 – 2566 1853 / 2566 4321 / 2566788 / 2566 4340 ;
Fax : 022 – 2566 2833, Email : sales@anandarc.com,
Website : www.anandarc.com

Dharam Industries - Fabrinox Division



Dharam Industries takes pleasure in introducing Fabrinox division. The division specializes in complete design, fabrication and installation of high quality stainless steel architectural metal-works with an in-house design team comprising of product designers and engineers to provide the clients with a flexible and creative approach in achieving spectacular and

unique design solutions. The manufacturing unit is located at Kundli near Delhi and is equipped with state-of-the-art CNC (computer numerical control) machines meant for fabrication and machining

of specialty components in stainless steel.

Innovative products with value added applications in the 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.

Dharam Industries is in the business of manufacturing high quality stainless steel products since 30 years and all infrastructure is to cater to mass production of these products.

Works : Piao Manyari, Narela Road, Kundli Haryana – 130 128
Distt. Sonipat, Haryana (India)
Tel : 0130-22195661, 2219562, 2219342
Email : info@fabrinox.net, Web : www.fabrinox.net





York Scientific Industries Pvt. Ltd

York Scientific Industries Pvt. Ltd. specializes in Stainless Steel Hi-Tech Hospital Lab, and Clean Room Equipment. These are very popular under the brand name YORCO. YORCO is in business since 1964, i.e. for nearly 43 years.

The products are manufactured using Japanese Technology Fully Automatic CNC Multistation Turret Machines, CNC Brake/Bending Presses, CNC Milling, CNC LATHE M/c, The plant is ISO-9001:2000 Certified.

Components are treated in latest plants like Electro Polishing, for a better finish and an enhanced life to the final products. A large range of products carry ISI Mark as well as the coveted CE certification. YORCO is also registered with NSIC, DGS & D, SSI, EEPC etc. Extensive exports are also made through WHO or directly against fierce international competition.

History

It all began more than 43 years ago when the first Hospital equipment was indigenously produced by York. York Scientific Industries was founded by a young entrepreneur, S.R. Arora, in 1964. His objective was far reaching, i.e. to make available world class equipment in India, at affordable rates. Out of his zeal to serve science in a bigger way, he expanded the company activities to manufacturing a comprehensive range of equipment, much of it in Stainless Steel. Then there was no looking back and today the company is the market leader in its field.

Today, a wide spectrum of products in the field of Pathology, Clean Air, Sterilization, Blood Banking, Forensic, Hospital Utensils, Furniture, Medical & Scientific Instruments and other Laboratory equipment are added to our range to meet and exceed customer needs in the field of instrumentation to serve science and mankind in every part of the globe, irrespective of geographical barriers.

Market Segments:

1. Universities, Medical Colleges, Engineering Colleges.
2. Hospitals and Research, Biotech. Laboratories
3. Pharmaceutical & Chemical Industries
4. Food Processing Industries.
5. Electronic & Electrical Industries
6. Atomic Energy
7. Fertilizer Industries

YORCO products set special standards: they always feature new, improved solutions to customer's specific requirement and are therefore, very efficient in practical application. This demands continuing development of leading-edge technologies to provide a comprehensive product range – and this is precisely what gives YORCO the foundation for its leading market position throughout India. The implementation of innovative concepts, the determination of trends and developments has been and remains the guiding principle for YORCO.

contd on pg12



AIR SHOWER



AUTOClave

Quality and Innovation

YORCO's dedication to quality is unparalleled and committed to set new standards to provide World Class quality products. YORCO strives to improve its product quality through continuous in-house R&D and our long association with customers has given us sound understanding of their needs. A world class R&D laboratory is also operating at its Sahibabad Plant.

Company Mission

The company is to excel in the field of instrumentation and serve science and mankind in every part of the globe irrespective of

geographical barriers. Customer Satisfaction is the driving force of the organization

People at the Helm of Affairs

1. Sh. S. R. Arora : Managing Director
2. Sh. Vinod Arora : Director – Production
3. Sh. Rishu Arora : Director – Technical

M/s York Scientific Industries Pvt Ltd
8/6 E, Site – IV, Sahibabad Industrial Area
Sahibabad Dist. Ghaziabad 201 010

Tel : 0120 – 2779934 ,35, 36

Fax : 0120 – 2779937, E-mail : ysipl@yorco.com

ISSDA Members' List: For contact details of members, please visit www.stainlessindia.org

PRIMARY MEMBERS

Adhunik Metaliks Ltd
Ambica Steels Ltd
Chandan Steel Ltd
Facor Steels Ltd
Isibars Ltd
Jindal Stainless Ltd
Laxcon Steels Pvt Ltd
Modern Steels Ltd
Mukand Ltd
Panchmahal Steel Ltd
Rimjhim Ispat Ltd
Shah Alloys Ltd
Shyam Ferro Alloys Ltd
Soni Ispat Ltd
Stainless India Ltd
Steel Authority of India Ltd
(Alloy Steels Plant + Salem Steel Plant)
Sunflag Iron & Steel Co Ltd
Twenty First Century Wire Rods Ltd
Valley Iron & Steel Co. Ltd
Viraj Alloys Ltd

PRIMARY MEMBERS – INTERNATIONAL

Arcelor Stainless India Pvt Ltd
Outokumpu India Pvt Ltd

ASSOCIATE MEMBERS

Aditya Forge Ltd
Ador Welding Ltd
Ampi Agencies Pvt Ltd
Anand Arc Electrodes Pvt Ltd
Apex Tubes Pvt Ltd
Architectural Division – JSL
Arm Innovations
Artech Welders Pvt Ltd
Autonix Auto Industries Pvt Ltd
Bansal Wire Industries Ltd
Batliwala Process Engineering
BHP Billiton
Bhandari Foils & Tubes Pvt Ltd
Bhansali Bright Bars Pvt Ltd
Bharat Earth Movers Ltd
Bhiwadi Metal Rollwell Pvt Ltd
Bizcon Business Consultants (I)
Cavalier, The
Choksi Tube Co Ltd

Connect Arch. Products Pvt Ltd
Continental Exports
Corus International (India) Pvt Ltd
Crystal Interior Products
Dharam Industries (Fabrinox)
Esab India Ltd
Flexi Film Wraps (India) Ltd
Flow Link Systems (P) Ltd
Garg Sales Co Pvt Ltd
Glencore India Pvt Ltd
Heavy Metal & Tubes Ltd
Hercules Marketing Pvt Ltd
Hindustan Hydraulics Pvt Ltd
Hisar Metal Industries Ltd
Honavar Electrodes Pvt Ltd
Inco Europe Ltd
Integral Coach Factory, Chennai
IUP Jindal Metals & Alloys Ltd
Jain Brothers Sanitation Pvt Ltd
Jyoti (I) Metal Inds. Pvt Ltd
Kamdheni Ispat Ltd
Kapasi Inc.
Kaushal Engineers
KEI Industries Ltd
Kich Marketing Pvt Ltd
Kirtanlal & Sons
Klinweld Wires Pvt Ltd
Kongu Engineers
Krishna Industries
Kuma Stainless Tubes Ltd
Kundan Industries Ltd
LPS Bossard Pvt Ltd
M N Dastur & Co
Macro Bars & Wires (I) Pvt Ltd
Magppie Exports
Manashi Interiors
Merloni TermoSanitari (I) Ltd
Metal & Steel (India)
Metallic Bellows (I) Pvt Ltd
Metco Marketing (I) Pvt Ltd
Modi Arc Electrodes Co
Neel Metal Products Ltd
New Era Industries
Nevatia Steel & Alloys Ltd
Nuclear Fuel Complex
Pheonix Appliances Pvt Ltd
Prakash Steelage Ltd

Quality Foils (I) Ltd
Raajratna Metal Industries Ltd
Rahul Industries
Rajlaxmi Industries
Rajendra Mechanical Inds. Ltd
Rail Coach Factory, Kapurthala
Rampra Steel Industries Pvt Ltd
Ratnamani Metals & Tubes Ltd
Ratnesh Metal Industries Pvt Ltd
Real Strips Ltd
Ruby Steel
SKM Steels Ltd
Sahu Refrigeration Inds. Ltd
Sameer Linkages (Exports) Pvt Ltd
Sandvik Asia Ltd
Scorodite Stainless (I) Pvt Ltd
Sharp Engineers
Shekasa Engineering Co Pvt Ltd
Simple Enterprises
Sreevatsa Stainless Steel Fabricators (P) Ltd
SteelRX Corporation Pvt Ltd
Stallion Systems Pvt Ltd
Sudhir Automotive Industries Pvt Ltd
Suhner India Pvt Ltd
Suraj Stainless Ltd
Surface Innovators Pvt Ltd
Tata Steel Ltd – FAMD
Tata Steel Ltd – Retail Initiatives Divn.
Tayal Furniture
Techno-Centre (India) Pvt Ltd
Trust Impexs
Universal Engineers
Valgro India Ltd
Valli Steel Industries Pvt Ltd
Velar Engineering Works
Venus Home Appliances (P) Ltd
Venus Wire Industries Ltd
Vishal Gas Services
Vishal Tubes & Pipes Pvt Ltd
Wire & Wire Products
York Scientific Industries Pvt Ltd

ASSOCIATION MEMBERS

Indian Ferro Alloy Producers' Association
Institute for Steel Development & Growth
Nickel Institute
Stainless Steel Rerollers Association