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# STAINLESS INDIA

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Development Association**  
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**A Magazine Devoted to Stainless Steel Applications**

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## Stainless Steel - Expanding Horizon



Over the last year, SAIL has come up with some of the most inspiring public installations made in stainless steel representing the versatility of this wonder alloy.

These various public installations truly highlight the excellent engineering properties in combination with beauty of stainless steels.

## “TREE OF PROSPERITY”

“Tree of Prosperity” carved out of Stainless Steel has been erected by Salem Steel Plant, a unit of Steel Authority of India Limited at its works.

They have named it “Tree of Prosperity” because they feel that it symbolizes the perpetual growth and prosperity that is envisioned for Salem Steel Plant. Its trunk symbolises the infrastructure of the plant & equipment and the branches represent various departments. The leaves symbolise the Salem Steel collective who photosynthesize the sunlight (resources) and fructify them into fruits, ie, the output.

The Tree of Prosperity has been crafted aptly in Stainless Steel which manifests beauty, permanence and eco-friendliness. This concept of a gleaming Coconut Tree, also known as MAHAVRIKSHA, in stainless steel, may be first of its kind in India and is indeed a unique effort.

This Stainless Tree measures about 5 metres in height, with a varying diameter of 200 to 350 mm through its trunk. Its leaves have been crafted out of stainless steel of grade 430 while its stem is made of grade 304. The outer cladding is of grade 430 and the inside SS pipe is made of grade 304.



## CHARKHA - Symbol of Swadeshi Kranti by Mahatma Gandhi

Continuing the zeal of bringing Stainless Steel in the public art and monuments, Steel Authority of India Ltd. along with Khadi & Village Industries Commission and New Delhi Municipal Corporation have put up a giant CHARKHA - a



symbol of Swadeshi Kranti by our Father of Nation Mahatma Gandhi, near Khadi Gramodhyog Bhawan over Palika Bazar at Rajeev Chowk, New Delhi. It is part of Charkha Heritage Museum and is 25 ft long and 13 ft high. It has been fabricated out of Stainless Steel of Grade 316L supplied by Salem Steel Plant of SAIL.

### Lion - Symbol of Make in India Initiative

To inculcate the spirit of “Make in India” amongst the people at large and visitors and employees of SAIL, a collage of SAIL PRODUCTS AND APPLICATIONS in the form of Lion was displayed at Pragati Maidan, New Delhi during IITF 2017. Now it is getting installed at Ispat Bhavan, corporate office of Steel Authority of India Ltd., New Delhi.

Lion - Logo of Make in India initiative of Honourable Prime Minister of India Shri Narendra Modi, has been made of Stainless Steel of Grade 316L. This artifact is hollow and 8ft long x 4 ft tall and 2½ feet wide in the torso.



### Gangaben Kutir

Gangaben Kutir - Weavers Chamber is a part of the CHARKHA heritage museum. It is an air-conditioned chamber where weavers are engaged in spinning continuously. This all-stainless steel air-conditioned



cubicle and the adjacent stainless steel information kiosk have been fabricated and supplied by SAIL. These are all crafted with 304 grade stainless steel produced by Salem Steel Plant. In the same garden leading to the Heritage CHARKHA museum as well as other popular public convergence spots in the Connaught place as well as the Defence Colony market, SS BOLLARDS supplied by SAIL have been installed by NDMC and SDMC. These LED lit bollards crafted with 304 grade stainless steel add light to lusture.

### Surya Kanti - Solar Tree

New Delhi Municipal Corporation has installed a Solar Tree of 6.8 meter height with 9 petals at Palika Vatika near the Palika Bazaar at Rajeev Chowk, New Delhi. It generates 1.26 KW of power, having mobile charging stations and interactive panel, in addition to LED lights. The stainless steel Solar tree fabricated by Steel Authority of India Ltd. is crafted out of 304 grade stainless.



For further detail please contact:  
**General Manager (Marketing), SAIL**  
 T: 0427-2384285, e-mail : ramadas@sail-steel.com

## Modern Stainless Steel Bus Queue Shelters with Solar panels



Continuing its contribution towards Smart City initiative, SAIL has fabricated and installed two solar powered bus shelters at Shanti Path, New Delhi on behalf of NDMC. Crafted with 304 grade stainless steel, these bus shelters are designed to generate approx. 5kw power. Besides being self-reliant in generating electricity for bus shelter requirement, it will help government in generating electricity through solar power. NDMC is planning to build more such solar powered stainless steel bus shelters.

## Infrastructure - Stainless Steel enters Rural India

Probably for the first time, Stainless Steel is being used for bus queue shelters in Rural coastal areas of Karnataka- Karwar. Under CSR, PepsiCo was convinced to use Stainless Steel as they were made to understand lifecycle costing and longevity advantages connected with this material. As the life increases multifold in comparison to other material they can advertise for a much longer period.



The designing was done by Stallion to keep the cost very economical and still be structurally strong to take various load factors involved in that geographical area. To ascertain this finite element analysis for structural integrity was done. The whole process was rooted through an NGO - Habitat for Humanity India. 10 Bus Shelters, each weighing 450kgs in 304 grade mirror finish was used.

This could become a role model project for Rural India, if perused systematically.

### Designers and fabricators

Stallion Stainless

#173, #2A KIADB 2nd Phase,  
Kumbalgodu, Bangalore-560074

Contact Person- Nishi Mehta

Email-id: info@stallionind.com

Mob- 9620398249 Ph- 08028437015

## Message from Executive Director, Salem Steel Plant

I am pleased with the efforts taken by ISSDA in collecting and presenting to the world of Stainless Steel about the various developments that are taking place in the Stainless Steel industry in the Indian sub-continent.

It is indeed an honour that ISSDA, in its Jan'18 issue, is publishing a special feature about artifacts crafted out of Salem Stainless. These architectural creations crafted out of various grades of Stainless Steel will not only be a testimony for the versatility of stainless steel but will serve as a motivating factor for others to create such creative expressions in stainless steel.



Besides, this effort of ISSDA will not only provide wide publicity to products of Salem Steel Plant but will serve as a valuable chronicle of the stainless steel developmental efforts in the country for future generations.

I once again thank ISSDA for its efforts and wish them success in all its endeavors.

**PK Mishra**

Executive Director

Salem Steel Plant, SAIL

## Workshop on Stainless Steel for Architecture Building and Construction

ISSDA, in association with Nickel Institute organized workshops in the city of Chandigarh, Kolkata and Vijaywada on 17<sup>th</sup>, 19<sup>th</sup> and 21<sup>st</sup> July 2017. The sessions were conducted by Mr Graham Sussex, a renowned Nickel institute consultant, in the field of Architecture, Building and construction. In Chandigarh, we also had well known Ar. Sangeet Sharma and Ar. Bimal Kachroo as speakers. Kolkata program was done in association with Institute of Steel Development and Growth (INS DAG). Vijaywada program had speaker from SAIL, Salem and Minox Metals, Bengaluru also. These programs targeted audiences belonging to Architecture Building and Construction and made them aware how the usage of stainless steel is important in their field in terms of endurance, long term durability and sustainability.

These conferences were attended by independent architects, builders, designers and participants from various institutions, public and private companies and government departments.

The topics covered in the programme are as follows:

- Stainless Steel Application in Architectural Applications
- Stainless Steel an ideal solution for Water Storage
- Recent trends in application of Stainless Steel in Architectural Building and Construction in India
- Stainless Steel in Structural Application
- Stainless Steel in Smart City
- Different Stainless Steel Finishes, etc.



*Keynote Speaker, Mr Graham Sussex, NI*



### Nickel Institute appoints Richard Matheson as Director, Market Development



Richard Matheson has been promoted to Director, Market Development, Nickel Institute as of January 1, 2018. Richard succeeds Nigel Ward who retired from the Nickel Institute on 31 December 2017. In his new role, Matheson will continue to develop the markets for nickel and takes over as the global lead for the Nickel Institute's Market

Development team. He is also now a member of the Nickel Institute's Management Committee.

Matheson was previously Deputy Director, Market Development & General Manager, Asia, for the Nickel Institute. He has worked in the nickel and stainless steel industries since 1987, when he began his career with Queensland Nickel. In 1992, he joined the newly-established Australian Stainless Steel Development Association (ASSDA) where he was Executive Director until 2017. In parallel, Richard Matheson has represented the Nickel Institute since 2007.

## A New Standard “High Strength Deformed Bars and Wires for Concrete Reinforcement - Specification” IS 16651:2017 Released

ISSDA is very pleased to inform its readers that the Indian Standard IS 16651:2017 “High Strength Deformed Bars and Wires for Concrete Reinforcement - Specification” has been released by Bureau of Indian Standards.

This standard was adopted by the Bureau of Indian Standard, after the draft finalized by the Concrete Reinforcement Sectional Committee, CED 54 was approved by the civil engineering division council.

The foreword of the standard says : “The performance of a reinforced cement concrete (RCC) structure decreases substantially in a corrosive environment. India has a large coastline where chances of Chloride induced corrosion in the reinforcing steel used in RCC structure made in the marine type environment of this area are high. A need was thereof felt to provide options to users, to consider use, in appropriate cases, such material, which in addition to satisfying mechanical properties required for reinforcing steel for use in RCC structures, also provide better corrosion resistance properties than carbon steel. Stainless steel reinforcement bars are one such material which offer these properties. This standard



भारतीय मानक  
Indian Standard

IS 16651 : 2017

कंक्रीट प्रबलन के लिए उच्च शक्ति  
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एवं तारें — विशिष्ट

High Strength Deformed  
Stainless Steel Bars and Wires  
for Concrete Reinforcement —  
Specification



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has therefore been formulated to fulfil the need of prescribing quality requirements of stainless steel reinforcement bars/wires for use in reinforced constructions as steel reinforcement.”

This standard covers three categories of stainless steels, namely austenitic, austenitic-ferritic( Duplex) and Ferritic. Guidance on selection and use of stainless steel reinforcement bars, as also their use with carbon steel reinforcement on selective use basis, has been given in this standard. In the formulation of this standard due weightage has been given to international coordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in India.

ISSDA is very thankful to all those who have contributed over the years in making and shaping of this standard. ISSDA sincerely thanks its member companies Outokumpu India Ltd, Raajratna Metal Industries Limited, Sunflag Iron and Steel Ltd and Mittal Corp Ltd. for all the support. We are sure that this standard will help producers and end users of reinforcement bars in creating sustainable and long lasting infrastructures.

The standard can be purchased online from the BIS e-sales web portal <http://www.standardsbis.in/Gemini/home/Home.action>.

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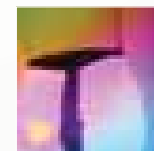
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# Knowledge Sharing and Training Session on Stainless Steel in Heavy Engineering

In continuation to ISSDA promotional activities, a series of knowledge sharing workshops were organised at different locations for heavy engineering/ nuclear industry with the help of Nickel Institute.

These sessions were conducted by a renowned Nickel institute consultant, Mr. Gary Coates. The objective of the programme was to disseminate information on grade selection, corrosion behavior, welding and fabrication issues on stainless steels.

These programmes received overwhelming responses from the participants of all the departments and companies and were well appreciated by one & all and this will definitely help them to use more stainless effectively.

Starting from a session in Chennai, where representatives from more than 40 companies participated, we conducted further sessions at BARC, Godrej and L&T as following:

*Monday, June 26, 2017 from 5:30 PM onwards*

## **Session on Duplex Stainless Steel**

**Hotel Raintree**

St Mary's Road, Chennai

*Tuesday, June 27, 2017 from 2:30 PM onwards*



## **Session on Usage of Stainless Steel in Process Equipment industry.**

Godrej & Boyce, Mumbai

*Wednesday, June 28, 2017 from 5:00 PM onwards*



## **Session on Usage of Stainless Steel in Nuclear industry.**

The Acres Club, Sapphire Banquet, Chembur, Mumbai

*Thursday, June 29, 2017 from 2:30 PM onwards*



## **Session on Usage of Stainless Steel in Heavy Engineering industry.**

SBU Block Auditorium L&T, Hazira, Gujarat



## Stainless Steel Training & Demo Van

Jindal Stainless has been conducting various activities for promoting stainless steel in ABC Sector. In this context, fabricators for stainless steel household items are being developed on all India basis and as of now more than 5200 fabricators have been given training in more than 47 cities. Further a training and demo van has been developed for providing onsite training to fabricators.

The training van carries Jindal Stainless branding and has all interiors made in stainless steel including walls cladding, roof, chequered floor and cabinets. Many of the items made in stainless steel are displayed on the shelves of the cabinets. Moreover, the van is equipped with Generator and all welding, finishing & Cutting tools to conduct onsite demonstrations for fabricators.

The van has covered more than 12000 KMs in last four months and has given practical training to more than 1250 fabricators. Welder moving along with the van has helped fabricators to make many more items like Furniture & utility items in stainless steel by practically fabricating them in their shops. More than 50 items including chairs, tables, cabinets etc. have been made as of now and many more are in pipeline. This is helping fabricators to develop more and more items in stainless steel.

Not only this van is used for training fabricators, it is becoming a part of road shows for consumers. Van has moved in many cities showcasing various possibilities in stainless steel to consumers and attracting lot of consumers to use & buy stainless steel items. Many of the leading institutes, RWA societies, etc. have been covered during road shows in more than 25 cities.

This is a unique concept in our industry & has been greatly appreciated by customers, fabricators and consumers and will definitely help in increasing per capita consumption of stainless steel in the country.

For further details, Please contact:  
[marketing@jindalstainless.com](mailto:marketing@jindalstainless.com)



## Seminar on Stainless Steel for Water Service Pipelines Treatment and Storage.

On behalf of Ministry of Steel and supported by Nickel Institute, ISSDA organized a special seminar on Stainless Steel for Water Service Pipeline Treatment and Storage at New Delhi on 10th November 2017. The programme was also supported by our primary member Jindal Stainless Limited.



*Hon'able Minister of State for Steel Mr. Vishnu Deo Sai & Dr. Aruna Sharma, Secretary (Steel) lighting the ceremonial Lamp.*



*Panel Discussion in progress*



*President ISSDA welcoming Mr. Abhoday Jindal VC MD, JSL*

This program was honored by the presence of Minister of State for Steel, Secretary Ministry of Steel, Secretary Ministry of Housing and Urban Affairs, Joint Secretary Ministry Drinking Water and Sanitation, Vice Chairman Jindal Stainless ( Hisar ) Ltd. , General Manager Asia, Nickel Institute, Director (Commercial) SAIL.

The seminar was attended by many Municipal bodies across India, various Government departments such as NDMC, CPWD, MOUD, CPHEEO, NWDA, EPIL, NBCC, HUDCO etc. and reputed professionals from the industry.

There were three sessions in the seminar. It started with the inaugural session and lightening of lamp. Welcome address was given by President ISSDA, Mr. K K Pahuja. He also addressed the global scenario of stainless steel manufacturing and uses. He brought the discussion to water pipelines issues in India and invited all stake holders to work with ISSDA to develop Indian standard for water service pipeline.



*Ms. Soma Mondal, Director (Commercial) SAIL in discussion with Mr. Vijay Sharma Sr. V.P. JSL and Mr. Rajiv Garg, AVP JSL.*



*Technical session in progress*



The theme address was given by Dr Aruna Sharma, Secretary Ministry of Steel. She highlighted the cost effectiveness of stainless steel over expedient material and its acceptance worldwide in different countries. She also highlighted health hazard associated with the use of other contaminating material when used with water.

Shri Vishnu Dev Sai , Minister of State for Steel gave the opening address to the session and appreciated the work of ISSDA. He highlighted the importance of water in our life , water shortages across country and issues in supply. He then spotted the requirement of Stainless steel in the sector to deal with such issues.

ISSDA released a book on the occasion, titled "Stainless Steel for Water Service Pipelines, treatment and Storage" which is a compendium of national, international articles and relevant information on advantages of using stainless steel in water related application with a special focus on leak proof water service pipelines. Detailed case studies from around the world, have been included which explains how various cities such as Tokyo, Seoul, Taipei have been able to overcome the problems of water leakages by adopting leak-proof stainless steel service pipelines for entire water distribution network of the city. The book also discusses various advantages stainless steel offers in areas such as waste water and potable water treatment plants, Desalination plants and bulk water handling. It is intended to serve as a reference and recall document for perspective users.

Panelist in the interactive session on Challenges and Opportunities of Stainless Steel in water service pipeline were Secretary Ministry of Steel Dr Aruna Sharma, Secretary Ministry of Housing and Urban Affairs Shri Durga Shanker Mishra, Joint Secretary Ministry of Drinking Water and Sanitation Shri Satyabrata Sahu, General Manager Asia - Nickel Institute Mr. Richard Matheson and Vice Chairman - Jindal Stainless (Hisar) Ltd. Shri Abyuday Jindal. This session was moderated by Ms Jyoti Mukul, Associate Editor - Business Standard.

Interactive technical session was graced by Mr. Richard Matheson, General Manager Asia - Nickel Institute, Shri Tushar Javeri CEO - Vasu Chemicals , Shri Gaurav Chowdhry Associate Vice President - Jindal Stainless Ltd, Shri Tarun Pal Director - Jove and Klar Engineering Ltd and Shri Shailesh Khmar - Viega India Pvt Ltd. This session was moderated by Ms Ruchika Chaudhry Govil Joint Secretary - Ministry of Steel.

The seminar has opened up opportunities for introducing stainless steel service pipelines. Further follow up will be done to take it forward.



*ISSDA Publication on "Stainless Steel for Water Service Pipelines, treatment and Storage" released on the occasion*

## Annual forward Looking Session on “Indian Standards on Stainless Steels - Importance & New Development”, at India International Centre.

Indian Stainless Steel Development Association held an Annual Forward looking session on 22<sup>nd</sup> September 2017 where the importance of standards and standardizations processes were discussed. More than 50 personnel of various stainless steel industry and Government bodies from BIS, Ministry of Steel, Jindal Stainless, SAIL, Sunflag Steel, Outokumpu, AB Inox, Jyotilnox, JSSL, Glencore and other members of ISSDA and special invitees were present in the event.

Mr. K.K.Pahuja, President, ISSDA gave welcome speech followed by opening remarks from Mr. ACR Das, Consultant, Ministry of Steel. Informative presentations on standardization were delivered by Ms. Madhurima Madhav, Scientist- C, BIS Mr. Ashok Kumar, Scientist, BIS and Mr. Rohit Kumar, Executive Director, ISSDA.

Participants were informed about the process of standard formulation, its importance and how it can be useful for stainless steel industry.



## A special session on “Stainless steel and Nickel Alloys for Defense, Aerospace and Nuclear Applications” at NMD 2017



A special session was organized at the 55th National Metallurgists' Day (NMD) and the 71st Annual Technical Meeting (ATM) an annual mega event of The Indian Institute of Metals on 12th November 2017 at Goa, where metallurgists and material engineers from the industry and academia participate and share their experiences and learnings on various aspects of metallurgical and materials engineering.

Objective of the seminar was to highlight the role of stainless steel and nickel alloys in Defence, aerospace and nuclear applications. Various top organizations like Indian Space & Research Organization, Defence Research & Development Organization, Department of Atomic Energy, Bhabha Atomic Research Centre, National Aerospace Laboratories, Indira Gandhi Centre for Atomic Research and other Premier Institutes participated in this session. The programme helped in coordinating with scientific community of the country to take stainless steel and nickel alloys promotion programme further.



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\* conditions apply

## “Purity of Taste - Bottling your water in the best way”

In this digital age when useful information can be quickly shared with a wider reach still it is seen that reusable plastic bottles are predominantly being used for drinking water. Most of the plastics are prone to bacterial growth as well as altering the taste of water. It is well known fact that next to glass, Stainless Steels are the best which offers “purity of taste” meaning it doesn't impart any flavors into the water and is completely safe of any contamination as it is a known food grade safe material.



It was during India International Trade Fair 2011 at Pragati Maidan, New Delhi that I came across reusable Stainless Steel fridge bottles at the pavilion of SAIL under the Ministry of Steel. It was being offered at a substantial discount and was still costly as compared to best of plastic bottles available at that time in the market. Being a person devoted to the stainless steel, I was fully aware of the hygiene qualities of stainless steels, and went ahead purchasing 6 bottles in spite of fear that my Home Minister will be unhappy knowing the cost of these bottles. Anyhow, she used these bottles along with plastic bottles and soon found the difference in the taste of water between these two types of bottles. She immediately discarded plastic bottles realizing the value of stainless steel bottles. She not only procured more bottles for herself but inspired her friends and relatives also to do the same. Soon our relatives and neighbors also wanted to procure these bottles.

Few years later when I was posted at Chennai, I stayed in the Guest House of SAIL and found that they were keeping plastic bottles in my room for water. I procured SS bottle for myself through online shopping. While wandering in the market I found SS fridge bottles at varying prices and much cheaper with different designs. Obviously these might have been made of low nickel austenitic stainless steel grades but 304 grades made Stainless Steel bottles were also available. When I visited ISSDA office, I found they are also using SS made water bottles only.

One need not go for laboratory test to check the leaching of plastic in water. Please keep water in plastic bottle and SS bottles together for one full day and check the taste yourself.

I would like to remind the readers of this magazine that drinking water is one of the most valuable and precious nutrient on the planet and when you carry it, it should be something special and better. Use stainless steel bottles.

nagendravisjay@stainlessindia.org

## Stainless Steel and the Union Budget 2018-19

The union government budget for the year 2018-19 presented by the Honourable Finance Minister Shri Arun Jaitley is going to strengthen the vision of this Govt. "Sabka Sath Sabka Vikas" as it is likely to bring down the fiscal deficit to 3.3% and bring up GDP growth to 8%. It has taken care of the farmers of the country and is trying to help the poor by creating “ease of living”.

However, for the Stainless Steel Industry, it is a mixed bag.

While it has not taken our wish list into consideration of reduced import duties on the raw material which are otherwise not available in India, it has provided some areas where we, the stainless steel industry, can try to expand the consumption of stainless steel in the country.

Following are the area where SS use can be accelerated..

- Gas connection under Ujjwala scheme target increased from 5 crores to 8 crores - potential for increase in SS Gas Stoves usage.
- Agri Market development - SS can be used in railings, grain silos, cold storages and various other equipments.
- Namami Gange Project - Sewerage Treatment plants require a good quantity of SS.
- Smart city projects, Heritage Cities development, Tourist centers development — Bus queue Shelters, Street seating arrangements, railings, dustbins, garbage bins, Solar trees and various other infrastructure projects. SS rebars also have a good potential in these projects.
- Providing water supply to all households in 500 cities - Water pipelines, plumbing in SS can have good potential.
- 12000 wagons and 5160 coaches are being procured during 2018-19. - Light weight wagons shall be made in SS. All passenger coaches shall be made out of SS for safety purpose.
- Redevelopment of 600 major railway stations & stations with more than 25000 footfalls will have escalators. - Sitting arrangements, dustbins, railings, trolley, food kiosk, roofing etc. Escalators will have a considerable quantity of SS.
- Connect 56 unserved airports and 31 unserved helipads and Existing 124 airports to expand airport capacity more than five times to handle a billion trips a year - railings, trolleys etc, even roofing also can be of SS, especially in the coastal area.
- Develop two defense industrial production corridors - SS has a large potential in the Defence sector.

NEW MEMBER



## Mishra Dhatu Nigam Limited (MIDHANI)

A Govt. of India Enterprises, Ministry of Defense, India

Mishra Dhatu Nigam Limited (MIDHANI) A Govt. of India Enterprises, was set up in 1973 at Hyderabad with the objective of providing the nation self-reliance in strategic materials. For over four decades now, MIDHANI has been handling challenging tasks of developing alloys, taking a lead position in indigenization of critical technologies and products to render support to several programmes of National importance and hi-tech segments of India industry. MIDHANI has now started offering its core competence of developing and manufacturing custom made alloys to suit the specific requirements of customers for their critical applications.

Growth of high technology industries is invariably interlinked with availability of special materials. Aeronautics, space, Atomic Energy, Armament, Power & General Engineering Industries has attained a high level of technical perfection which has in turn dictated stringent quality requirement on the materials.

Their clients and involvement sectors are Defence,



Aeronautics, Space, Nuclear, Power, and Engineering & Chemical Industries.

MIDHANI specializes in manufacturing a wide range of superalloys, titanium, special purpose steels and other special metals and alloys meeting stringent international standards for application in aerospace, defence, atomic energy, power generation, chemical and various other high technology industries.

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NEW MEMBER

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Vikas Hitech Castings has set up a state of the art Investment Casting plant - a first of its kind in Eastern India. The plant has been designed to be flexible to cater to the varied demands of the industry. They can produce products from 100 gms to 500 gms.

Vikas Hitech considered as one of the best manufacturing units, having its in-house advanced technologies to develop

and manufacture various Casting, Forging & Machined Components. The plant can produce Stainless Steel and Mild Steel casted products. They have also set up a complete polishing set up so that the Stainless Steel casted products can be delivered as completed polished finished products. The firm is manufacturing castings in Stainless & Alloyed Steel for furniture and cookware industry.

They manufacture finished components as per the customer's specific requirements and use, with high degree of precision both in quality and time with personalized services to their strong customer base through out the globe.

They deal in Hardware & Spares Frame Components, Automobile Components, Non Ferrous Components, Railway Components, Food, Pharma & Beverage Machine Components and General Engineering Components.

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NEW MEMBER



## Inoxcolorz Private Ltd.

Inoxcolorz Private Limited provide colored Stainless Steel by PVD coating for architectural, commercial and automobiles applications. It was incorporated in the year 2016. Under the leadership of skilled mentors, they have attained tremendous growth and success in the industry within the short time span.

Their entire range is inspected on different quality parameters such as finishing, durability, strength, designs etc. in order to leave no scope of defects. Besides this, their services are highly admired for longer coating life and timely execution.

They are highly acknowledged for offering premium products and services in the market.



### Inoxcolorz Private Limited

2381/12, Shop No. 5, First Floor,  
BeadonPura, Karol Bagh, Delhi, India  
Mobile : +91-9583177777, +91-9654957322,  
+91-7082807360

Email: info@inoxcolorz.com  
Web: www.inoxcolorz.in

NEW MEMBER



## Kanoi Metal LLP

Kanoi Metal Corporation, was started in 1975 with primary objectives of providing Excellent Quality at Right Prices and Right Time. These Objectives have been Endeavour of Growth and Success for the last 40 Years. They have been supplying materials to various Government Departments, Large and Medium Companies, Fabricators and Dealers.

They source the materials directly from Manufacturers like SAIL-Salem Steel Plant and Jindal Stainless Ltd, Hisar & Jajpur, thus providing Manufacturers Test Certificates and timely delivery at extremely attractive prices.

They have Warehouse of 5000 Sq.Ft, to keep Ready Stock of Sheets & Plates to cater to the immediate requirements of all Esteemed Clients. With their Branch Office with a full-fledged team of Purchase Executives in Mumbai, They are able to source various Standard & Non-Standard Materials to cater all the requirements of their Customers.

### Kanoi Metal LLP

#128, LinghiChetty Street,  
Behind GPO,  
Chennai-600001.

P: 044 - 25229984 / 23465010

F: 044 - 25229985

Email: sales@kanoimetal.com

NEW MEMBER



## M/s Met Tech Steel Works

M/s Met Tech Steel Works is a manufacturer of quality stainless steel tubes and pipes in all sizes and shapes. They are based in Raipur and are exclusive manufacturer of curtain rods with superior finishing and excellent quality.

Inspired By Technology, Driven By Passion



### Contact Details:

Mr. Manish Nihichlani-(Director)  
Office & CO. :  
Plot No. 23A - 23B, Metal Park,  
Phase-I, Raipur (C.G.)  
E-mail : msw.rpr@gmail.com  
Mob. : 9300626509/10/11/12  
Web : mettechsteels.com

NEW MEMBER



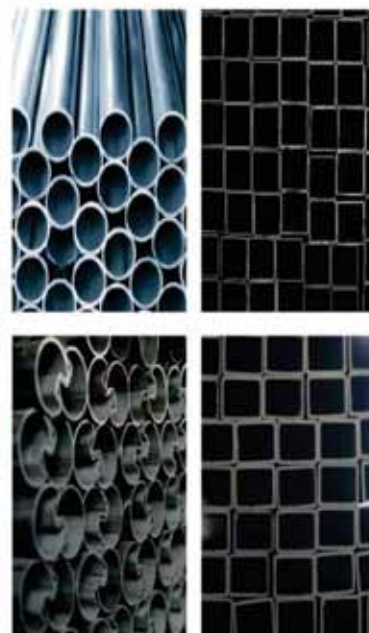
From the House of

Mrinalini Industries,  
B-63, SPCCF Industrial Park, Irungattukottai, Tamil Nadu - 605 117  
☎ +91 44 4710 0170  
✉ marketing@sarstubes.com  
www.sarstubes.com

### Quality & Trust : Our Key To Success

Inspired to meet the growing demand for SS Pipes & Tubes in India Mrinalini Industries has established its brand **SAR** to specialise in manufacturing SS welded ornamental pipes & tubes product range. Production operations are based at Irungattukottai, 35 kilometers west of Tamil Nadu's capital Chennai, conforming to ISO 9001 : 2015 standards. **SAR** is recognized as a regional leader in the SS Pipes & Tubes industry. With its state of the art manufacturing infrastructure, vast experience and excellent manufacturing culture, its capabilities match with the best in business, globally.

### OUR UNIQUE ASSURANCE





P. S. Raj Steels P Ltd. a part of PSSR Group of companies, which came into existence in the year 1956. With the sheer dedication and hard work of Mr. Raj Kumar Gupta, the Chairman, the company has grown magnificently well and is still growing at a rapid pace. His focus in "Transforming Potentials into Performance" has been instrumental in making it a market leader. They are an ISO 9001-2008 certified company and are rated & appreciated by CRISIL.

Their manufacturing unit and registered office is at Hisar, Haryana, sprawling over an area of 5 acre. They have advanced manufacturing unit equipped with latest manufacturing tools and technology. They have segregated units that include Procuring Unit, R&D Unit, Manufacturing Unit, Quality Unit, Storage Unit, Packaging Unit and Logistics Unit.

**Major Products & Grades of Stainless Steel:-**

- **Stainless Steel Welded Tubes & Pipes**
  - Size Range:- 9.50mm to 101.40 mm
  - Thickness:- 0.80mm to 4.00 mm
  - Grade:- 201,202, 304, 316, 409
  - Finish:- No.1, 2B, Matt, Glossy

**- Stainless Steel Welded Nominal Bore Pipes**

- Size Range : ½" NB to 8" NB
- Thickness:1.50mm to 6.00mm
- Grade : 201, 202, 304, 316
- Finish : No.1, 2B, Silver

**- Stainless Steel Round & Square Bar**

**- Stainless Steel Plates & Sheets**

**- Stainless Steel Strips/Coils**

**- Stainless Steel Checker & Designing Sheet**

Dealers across all over India: - They have established dealers at different major locations all over India like Delhi, Hisar, Lucknow, Agra, Kanpur, Morena, Varanasi, Moradabad, Mathura, Haridwar, Patna, Gwalior, Jhansi Bareilly, Jammu, Bhubaneswar, Kota, Mohali etc. to ensure timely delivery to the clients.

**Contact**

**Mr. Deepak Kumar Gupta**

VPO - Talwandi Rukka

Hisar, Haryana - 125001

Web : <http://www.psrajsteels.net>

Email: [info@psrajsteels.com](mailto:info@psrajsteels.com)

STARCKE offers full expertise in abrasive technology and helps you to find the ideal grit type, backing, and bonding system-for first-class results in surface finishing.

They develop and supply quality abrasive for metal working applications in industry and trade, e.g. for stainless steel, medical engineering, fittings, fixtures, and turbine blades. They support their customers by offering competent services through out all process stages.

STARCKE develops and manufactures heavy-duty abrasive belts optimized for use in stainless steel processing operations.



Offering highly flexible abrasives for small diameters, STARCKE helps ensure perfect surface finishing, for example in the fittings and fixtures industry.

**Areas of application:**

- Coarse grinding
- Deburring
- High volume in a short time
- Coil grinding
- Centerless, tubes or cylinders
- Wire grinding
- Rectangular tubes ...etc.

**Recommendation (In place of):**

- Conventional products (Mono coated Abrasives.)
- Zirconia alumina products
- Ceramic grain products

**Starcke Abrasives India Pvt. Ltd.**

South Block, Office 513, Sacred World,  
Wanowarie, Pune, Maharashtra - 411 040

Tel . : 020 4122 0134

Fax. : 020 4122 0136

[info@starcke.in](mailto:info@starcke.in)

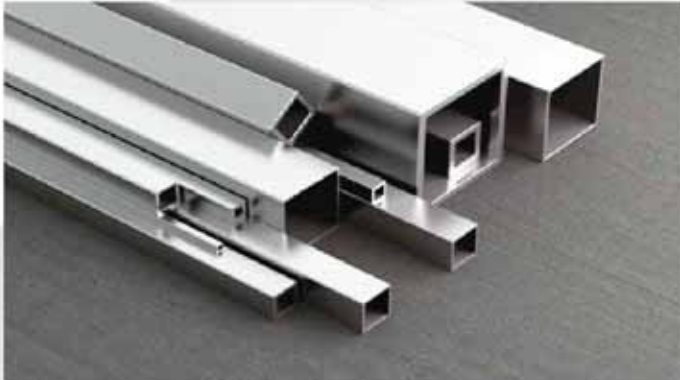
[www.starckeindia.com](http://www.starckeindia.com)



stainless is  
our passion

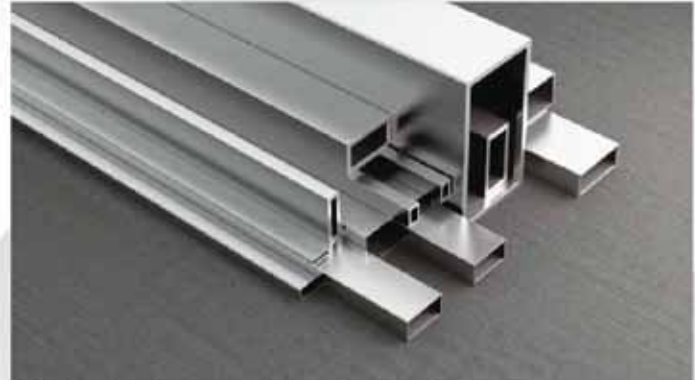


Introducing first time in India Stainless steel hollow sections with dimensions for SHS upto **400 mm X 400 mm**, RHS upto **500 mm X 300 mm** with thickness upto **15 mm**.



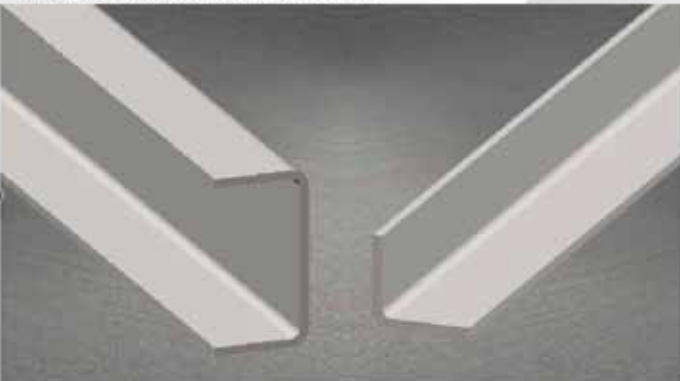
#### Welded Square Hollow Sections/Tubes

Size : 12 x 12 mm to 150 x 150 mm  
Thickness : 1.0 mm to 6.5 mm



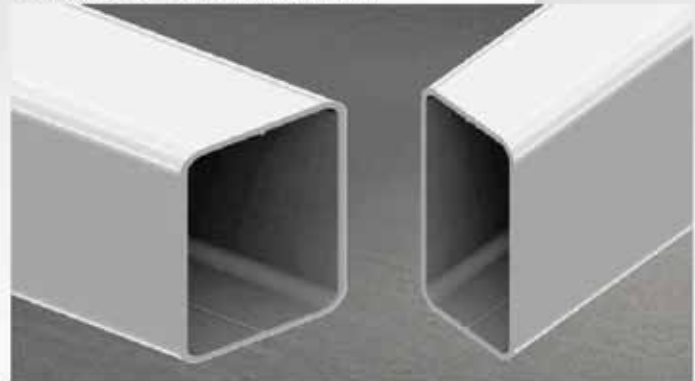
#### Welded Rectangular Hollow Sections/Tubes

Size : 20 x 10 mm to 200 x 150 mm  
Thickness : 1.0 mm to 6.5 mm



#### Raaj Profiles

Size: For "L" Profiles 50 mm X 50 mm to 200 mm X 200 mm  
For "U" Profiles 50 mm X 80 mm X 50 mm to  
110 mm X 280 mm X 110 mm  
Thickness: 3.0 mm to 15.0 mm



#### Press Brake Tubes

Size: Square 100 x 100 mm to 400 x 400 mm &  
Rectangular 100 x 150 mm to 500 x 300 mm  
Thickness: 3.0 mm to 15.0 mm

**A Group with International Reputation for its Quality Manufacturing of Stainless Steel Hollow Sections in Compliance with International Standards.**

#### ACHIEVEMENTS

Exporting to 17 countries across the globe.

- ISO: 9001-2008, ISO: 14001:2004 and OHSAS:18001-2007 certification for best manufacturing and operational practices.

#### TECHNOLOGY

- TIG-PLASMA – TIG welding technology for precision.
- State-of-the-art manufacturing facilities with advanced technology tube mills, online polishing machines and belt polishing machines.
- The Company has installed the 'Direct Cage Forming Mill' which is first-of-its-kind capacity in Asia, to manufacture Stainless Steel Hollow Sections / Tubes.

#### AREA OF APPLICATION

- Construction and Architectural Design, Food and Pharmaceutical Industries, Offshore and Marine Industries, Metro Train, Railways and Bus Body Building, Process Machineries, Nuclear Plants etc.

- Annual production capacity of 6000 MT.

- Raajratna Group has annual turnover of USD 200 million.

- We deal in Austenitic, Ferritic, Duplex and Lean Duplex materials and also manufacture welded tubes of special grades on demand.

**Raajratna** Ventures Ltd.

401, Elenza Vertex, Opp. Zainobiya  
Sindhuhavan Road, Ahmedabad. 380 059  
Gujarat. INDIA

Phone no: +91-79-2970 3251 / 3252 / 3253 / 3254

Cell : +91-9909947438

E Mail : domestic@raajtubes.com

Web : www.raajtubes.com

## New Joining

The Indian Stainless Steel Development Association has appointed Mr. N. K. Vijayvargia as a consultant. Mr. Vijayvargia, former Dy. General Manager of Steel Authority of India Ltd., has experience in the Industry since 1978. He brings with him a vast experience in various aspects of production, marketing and application of Stainless Steel.



After a brief training at Rourkela Steel Plant in working of an integrated steel plant, he had training in various aspects of cold rolling of Stainless Steel at Point-de-Roide, France plant of Peugeot-Loire (Now APERAM, France). He was a part of team which finalized process parameters of various units of Cold Rolling Mill complex of Salem Steel Plant during commissioning of the plant. While working in the quality control department of SSP, he also helped some of customers in solving problems during fabrication of Stainless Steel. He also had a brief stint of around 3 years at Alloy Steels Plant, Durgapur for co-ordination between Salem and Durgapur for quality and production of SS slabs. Later he shifted to Marketing and Sales of flat products of Stainless Steel and is having experience from field marketing to policy making for 23 years. He has been a member of various committees of Bureau of Indian Standards.

A life member of Indian Institute of Metals, he is a Metallurgical Engineer from Malaviya National Institute of Technology, Jaipur and has a Diploma in Management from AIMA.

[nagendravisjay@stainlessindia.org](mailto:nagendravisjay@stainlessindia.org)

### Disclaimer

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## Tailpiece



The year 2017 has been another fulfilling year for Indian Stainless Steel Industry. While the exact data is awaited, it looks that growth momentum was maintained to further consolidate India's position as second largest Stainless Steel market in the world.

The Government responded positively to curb unfair trade practices from few countries, which helped to improve the sentiments. The challenges of import threat, however, still remains and we have to be vigilant on the issue, particularly imports shifting to downstream SS Products or rules of origin being violated to divert material through third countries.

There were many positive development in the Indian market. Railways stepped up the pace of replacing old mild steel coaches by LHB stainless steel coaches. Metro rail projects in different cities picked up momentum. Smart city projects really took off. The General Financial Rules 2017 of Ministry of Finance have incorporated the principle of Life Cycle Cost for Government Projects, where stainless steel can score very high. Government has taken policy initiative to give preference to domestic steel in public projects. Indian Standard for Stainless Steel rebars was published during the year.

We are committed to continue our efforts for developing new Stainless Steel applications and some of ISSDA's efforts have been given in this publication. We invite our members and stakeholders to work with us for providing sustainable stainless steel based solutions for our growing economy.

[karan@stainlessindia.org](mailto:karan@stainlessindia.org)

## Attention Readers !

You can receive your personal copy of 'Stainless India' by sending your complete postal address and contact details to:

[nissda@gmail.com](mailto:nissda@gmail.com)