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# STAINLESS INDIA

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## Stainless Steel Façade for Durability & Longevity



Stainless Steel has been the pre-eminent material for projecting a progressive, modern image of architecture and building for over last many years where long-term durability is the primary consideration.

Stainless Steel has yet again found its way in a new building in Mumbai, a coastal city where it has been used as a façade to counter the effects of corrosion and giving it a modern look.

First national museum for Indian cinema will be housed in a heritage building called Gulshan Mahal at Peddar Road, Mumbai. A new swanky modern building,

recently made of Glass and Stainless Steel, is also going to become a part of National Museum. This will be the first museum dedicated to films in India. Both the buildings will be displaying the chronology of India's cinematic journey. The Phase I of the museum in the heritage building will be mostly displaying static artefacts and telling the story of Indian cinema in a chronological form whereas Phase II of the Museum, being housed in the modern building will sport over 40 interactive galleries devoted to cinema across India, journey of Indian cinema from silent era to talkies, technology and creativity in cinema as well as a children's activity gallery.





Since the Part II of the project is to show the modern cinema and technology, the project authority wanted to build something modern and sustainable reflecting the agility, vibrancy and aesthetics of Indian Cinema. A part of Phase II building, a NBCC project done by M/s Shapoorji Pallonji & Company Private Limited, is having Stainless Steel on the façade of the building. Being in coastal region selection of grade and surface

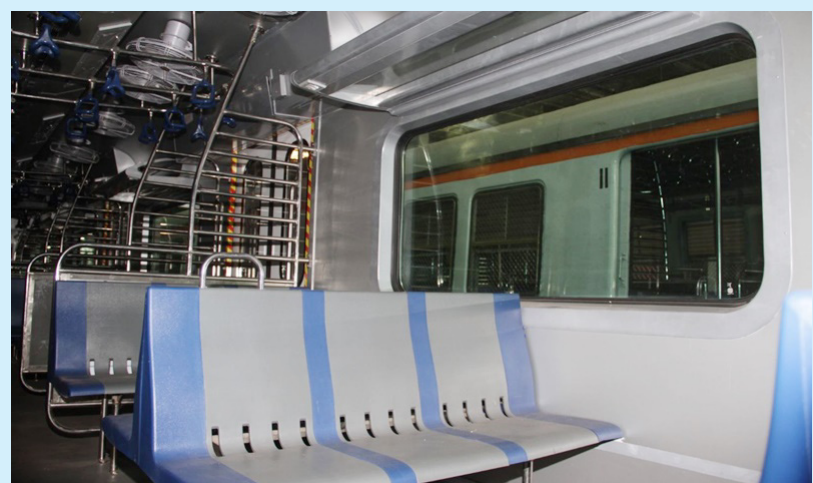
finish is utmost important and keeping this in mind stainless steel grade 316L was selected. Steel Authority of India Limited (SSP) supplied 45 MT of 1.6 mm thick sheets.

When asked why stainless steels were preferred, one of the field experts informed us that environments with higher pollution levels or coastal salt exposure causes accelerated deterioration of the most common type of materials. For example, the corrosion rates of copper and aluminium are typically 10 to 100 times more than that of stainless steels in such environments. When stainless steels are properly selected and maintained, it can remain attractive for centuries.

The ability to wrap buildings in relatively lightweight skins and the simultaneous introduction of new finishes provided a broad range of design possibilities. Interest in sustainable design has grown significantly around the world. Stainless steel illustrates exceptional performance and cost effectiveness as an architectural design material and its appeal for sustainable design where long-term performance is expected.

## **Stainless Steel Seats Replacing Polycarbonate Sheets in Western Railways**

Western Railways has decided to replace existing polycarbonate seats with stainless steels on all its suburban locals' second-class coaches. The decision was taken after complaints of frequent breakage of polycarbonate seats. Stainless Steel offers good strength making the seating sturdier. Also, stainless steels are known for its corrosion resistance and offers extended service life compared to polycarbonate seats. Railway authorities introduced polycarbonate seats in these second-class coaches procured under the first phase of Mumbai Urban Transport Project (MUTP) because the material was chosen to be fire-resistant and recyclable. But over the years these seats turned out to be easy to vandalize and difficult to maintain. Stainless Steel is not only fire-resistant and recyclable but it offers longer life, are easier to maintain and cannot be vandalised. Stainless steel seats, once designed properly, also helps to make sitting more comfortable. MUTP runs a fleet of about 100 suburban locals and a complete switchover to stainless steel seats will be a good opportunity for stainless steel industry.







स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड  
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## Smart Poles in Stainless Steels for a Smart City



The concept of smart city has brought a great opportunity for increasing the usage of stainless steel in the country. Stainless steels are known for its aesthetics, corrosion resistance and strength. If there is one product which needs combination of all these properties it is these smart poles. These day normal electric poles are getting a lot of attention from cities around the world and are getting transformed into smart poles. These new transformed streetlights are now developed to work as smart poles having environmental monitoring station, a wi-fi hotspot, a CCTV camera apart from the normal lightings

Recently, New Delhi Municipal Council has come up with a smart pole project. A normal electric pole is being transmuted in to a smart pole with smart LED light, air sensors, Wi-Fi connectivity and CCTV cameras. Air sensors are to monitor pollution parameters and will send live feed to central command. Wi-Fi installed at these poles are to provide connectivity nearby, CCTV cameras on these poles will also help to upgrade security infrastructure in central delhi areas. These poles will have hydraulically operated underground cabinet for hosting telecom equipment.

These equipments, both on the top as well as in the enclosure below required a material with good strength, suitable for extended service life and maintenance free. Stainless steel was selected by NDMC for the construction of these poles to fulfill and achieve all these requirements. These poles are 9 to 12 meters height and made in 316L grade stainless steel.

In the first phase, 55 smart poles have been installed in areas of Connaught Place, Baba Kharag Singh Marg, Janpath, Kasturba Gandhi Marg, Sansad Marg, Barakhamba Road, Tolstoy Marg.

Similar smart poles are being erected in Indore, Bhopal, Kalaburagi, Dharwad and Vizag. At Vizag, these poles will be integrated with command control centre of disaster management system. Most of these cities are implementing this project on DBFOT basis in PPP model.

Smart poles are all about increasing urban efficiency, while at the same time keeping the clutter of street infrastructure item to minimum. Since they can incorporate software controls and sensors that can receive and transmit information, they support all kinds of smart city applications. It is believed that in times to come, these smart poles will be installed in every city considering the compact usefulness and stainless steels will always remain the first choice for material of construction.





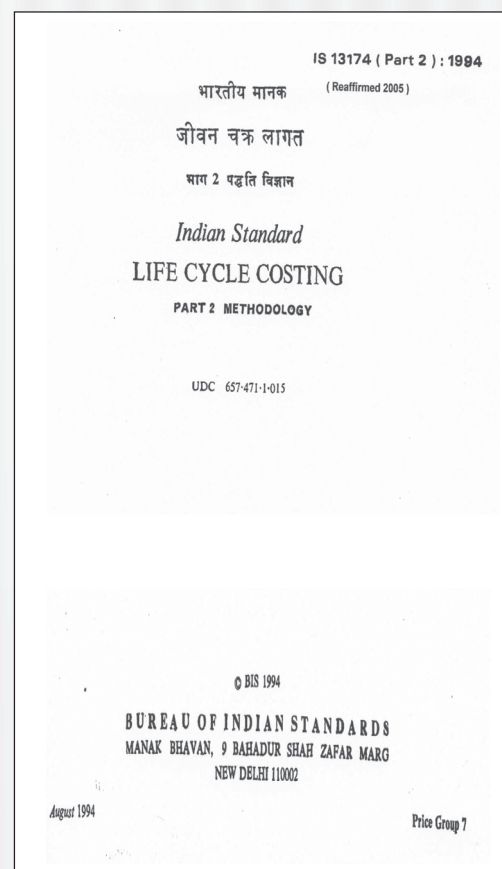
## Life Cycle Costing - Advantage Stainless Steel

Stainless steels have traditionally been specified in applications where the primary requirement is corrosion resistance. Life Cycle Costing/LCC is a technique developed for identifying and quantifying all costs, initial and ongoing, associated with a project or installation over a given period. The full cost of a project includes projections of future interest and inflation rates, maintenance intervals & costs, and the desired service life.

Now Stainless Steel producers and fabricators can get advantage in government procurements by sighting Life Cycle Costing. **Manual for Procurement of Goods 2017**

issued by Government of India, Ministry of Finance, Department of Expenditure has brought the concept of Life cycle costing in the government procurement also. To quote this manual "The concept of price can be refined further to take in to account not only the initial price paid for the requirement but also other cost such as maintenance cost, operational cost and disposal cost (also termed as Life Cycle Cost)".

Although Stainless Steel cost more initially, it is well known fact that due to its very good corrosion resistance, it lasts longer, does not require very elaborate maintenance, is reusable and gives good value at the end of service life. Therefore, the above referred manual would trigger more usage of Stainless Steel in government sector, wherever possible. Also, there is an **Indian Standard for Life Cycle Costing, IS 13174** (in two parts) existing since 1991 and has been reaffirmed by Bureau of Indian Standards in the year 2005 which can be used as a base for calculation of life cycle costing.





## Knowledge Sharing Session on "Usage of Stainless Steel Alloys in Power Sector"

A knowledge sharing session was held on 2nd May 2018 at BHEL premises at Noida on the Usage of Stainless Steel Alloys in Power Sector. Mr. Gary Coates made a presentation to a team of engineers from design and production on various technical aspects of stainless steel and nickel alloys usage in power plants. In his presentation, Mr. Gary shared the world-wide experience of usage of stainless steel and nickel alloys in Flue Gas desulphurization Chimney and its liners. He also covered the advantages of use of SS and Nickel alloys over titanium clad and borosilicate liners. Technical queries related to material selection and fabrication were satisfactorily answered.



## Seminar on "Stainless Steel and its Fabrication for Food Processing Plants"

A seminar was held at Hotel City Park, New Delhi on 1<sup>st</sup> May 2018 on Stainless Steel and its Fabrication for Food Processing Plants. This event was organized by ISSDA in association with Nickel Institute and supported by Jindal Stainless Limited. Nearly 35 participants from various food processing units participated in the programme. Main Speaker of the event Mr. Gary Coates, Manager Market Development and Technical, from Nickel Institute, covered the importance of grade selection and its properties for food processing applications. He also covered the right practices of fabrication and handling while dealing with stainless steel. Mr. Rohit Kumar, ED, ISSDA in his presentation emphasized on the need to understand the various types of stainless steel grades and methods to



identify them. All presentation were well appreciated by audience and many technical queries were satisfactorily answered.

## Workshop on "New age Applications of Stainless Steel & the Challenges in SS fabrication"

A workshop was held at CJ Pallazzio Hotel, Salem on Tuesday, May 29<sup>th</sup>, 2018 on "New age Applications of Stainless Steel & the Challenges in SS fabrication". The workshop was organized by Indian Stainless Steel Development Association in association with SAIL, Salem Steel Plant, Salem and The Institution of Engineers (India), Salem Local Centre and PS Raj Steel.

Nearly 120 participants attended the event. The objective of the programme was to create awareness about various grades of SS, their properties and its uses, in addition to the challenges involved in SS fabrication.

The programme also had a display of Stainless Steel products and equipment used in fabrication. The inaugural address was given by Mr PK Mishra, ED, SSP along with presentations from ISSDA, SAIL(SSP), PS Raj Steels and IEI.

All presentations were appreciated by the participants and many technical queries were satisfactorily answered.





## Seminar on "Duplex Stainless Steel and Its Application in Strategic Sector"

A one-day event was held at Hotel Vivanta by Taj on 26<sup>th</sup> April 2018 at Hyderabad on "Duplex Stainless Steel And Its Application In Strategic Sector". This event was organized by ISSDA and IIM Hyderabad Chapter under the aegis of Nickel Institute and MIDHANI. More than 70 participants took part in the programme from various sectors of defence, nuclear, aerospace and other divisions along with OEMS and stainless-steel manufacturers. Chief Guest of the event, an eminent Scientist and Director General Naval Systems and Materials, Dr Samir V Kamath, gave the key note address. Dr D K Likhi, CMD MIDHANI in his inaugural address emphasized on the need to understand more about duplex stainless steel and its properties to find new applications in defence and other related applications. Main Speaker of the Event, Mr. Gary Coates, Manager, Market Development and Technical from Nickel Institute in his presentation covered technical and practical aspects of duplex stainless steel in production, fabrication and end use. His presentation was well appreciated by audience and many technical queries were satisfactorily answered. During the day, other technical presentations from scientist community and industry were presented on various aspects of duplex stainless steels on processing, welding, pipes and tubes and flat products. In his vote of thanks, Mr. VRS Murthy from Indian Institute of Metals, Hyderabad Chapter thanked all the speakers and participants for a successful event.





## Knowledge Sharing Session on "Stainless Steel in Food Processing Industry and its Best Practices"

ISSDA (Indian Stainless Steel Development Association) in association with Nickel institute conducted an in-house workshop on "Stainless steel in Food Processing Industry and its best practices" in IDMC, Anand, Distt. Baroda on Friday, 27<sup>th</sup> April 2018.

IDMC (Indian Dairy Machinery Company Limited) is one of the leading Industry that manufactures food and beverage processing equipments. They work in a wide range of areas covering equipment manufacturing for wide variety of food processing plants such as dairy, beverages, refrigeration of ice creams, cheese, meat processing plant and many more.

This program was attended by Senior and Middle level Technical executives of the company. Key Speaker of the program, Mr. Gary Coates, discussed about various stainless steel grades being used in the industry, their grade selection criteria, types of corrosion, right fabrication practices and right practice for handling and storage of stainless steel. Technical questions were raised on the issues related to corrosion in Stainless Steel and onsite solutions was provided to them.



## Knowledge Sharing Session on "Usage of Stainless Steel Alloys in Power Sector"

A knowledge sharing session was held on 2<sup>nd</sup> May 2018 at NTPC premises at Noida on the "Usage of Stainless Steel Alloys in Power Sector". Mr. Gary Coates made a presentation to a team of engineers from design department on material selection and other technical benefits of using stainless steel and nickel alloys in power plants. In his presentation, Mr. Gary shared the world-wide experience of usage of stainless steel and nickel alloys in Flue Gas desulphurization Chimney and its liners. He also covered the advantages of use of SS and Nickel alloys over titanium clad



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STAINLESS STEEL IN SMALL QUANTITY

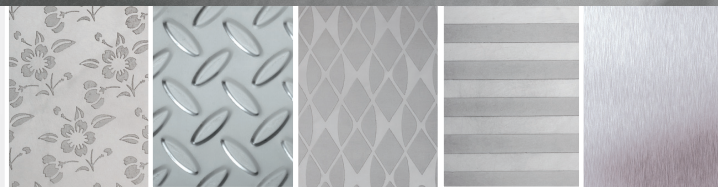
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NEW MEMBER

## Avtar Steel Limited

**Avtar Steel Limited** - a 30 year old name in the Stainless Steel Industry of India is one of the largest producers of Stainless Steel products.

They are ISO 9001:2008 certified - public limited company, specializing in the manufacturing and export of high quality Stainless Steel Bars & other profiles.

Their state-of-the-art manufacturing facilities are spread in the district of Sonapat, Haryana (North India) & their headquarter is situated in New Delhi. They have overseas offices at Hong Kong & Vietnam.

Fully integrated Stainless Steel Mill - with their own Melting Shop, AOD & LRF Refinement Facilities, Hot Rolling Division, Bright Bar Division, Annealing Facilities, Pickling unit & Packaging Lines. With production capacity of around 70,000 Tons per annum and they are one of the largest manufacturers of Stainless Steel Bright & Black Bars.

For complete company information, infrastructure & certifications, please visit their Website - [www.avtarsteel.com](http://www.avtarsteel.com)

**Their Production Range as under :-**

**Stainless Steel Grades:**

ASTM: 304/304L, 316/316L, 316Ti, 347, 317, 321, 303, 410, 420

EN: 1.4301/1.4307, 1.4401/1.4404, 1.4571, 1.4541, 1.4305, 1.4021

**Their Product Range :**

CAST Billets :

Size mm - 80x80, 100,100, 120x120, 140x140, 160x160, 200x200

Condition - As Cast, Full Ground

Bright Bars

Round Bar : 16mm to 80mm - 5/8" Inch to 3.25" Inch

Tol : h8, h9, h11, K12, K13

Length : 3 meters to 6 meters - 12' to 24'

**Condition of supply :** Peeled and Polished, Smooth Turned, Peeled and Centreless Ground, Square Bars, Hexagonal Bars, Flats of sizes from 10 mm to 60 mm

**Corporate Office**

15th Floor,  
Aggarwal Corporate Heights,  
Netaji Subhash Place,  
Pitampura, Delhi - 110034  
E-mail : [info@avtarsteel.com](mailto:info@avtarsteel.com),  
[sales@avtarsteel.com](mailto:sales@avtarsteel.com)  
Telephone : +91-11-66066666  
(100 Lines)  
Fax: +91-11-66066700



NEW MEMBER



## Metro Corp

They are known in the steel manufacturing industry to serve TMT bars under their brand name. With their business locations, based in Bhiwadi, Rajasthan, the company is headed by Mr. Ashok Garg and Mr. Vijay Garg. With the experience of these directors of the company, the company is moving forward towards higher growth at great rate.

Other than the Metro TMT steel bars, they also offer a complete range of steel rounds, steel squares and steel rods. They serve immediate as well as bulk requirements of diverse engineering and industrial projects across the nation. They also provide consultation to their clients as per their specific projects.

Metro TMT has strengthened its share in the industry by optimizing its resources and adopting aggressive marketing strategies.. With business acumen and professional excellence, the company aims to retain the position of leadership by developing highly functional TMT bars and other steel products.

Metro TMT constantly pushes its limits beyond the benchmarks for redefining the definitions of quality and customer services across diverse industries. To achieve expected growth objectives, the company regularly invests in advanced technologies and compatible human resources.

**Metro Bright Bar (India) Pvt Ltd**

KD-307, Pitampura, New Delhi

Tel.: 011 27317382, 011 27313909

E-mail: [info@metro-corp.in](mailto:info@metro-corp.in), Website : [www.metro-corp.in](http://www.metro-corp.in)

NEW MEMBER



## Modi Hitech India Ltd.

Welding Consumable Division was established in the year 2008, under the proficient leadership of Mr. R.K. Agarwal. Along with the Exe. Director, the Owner of Modi Group, Mr. U. K. Modi has also put in his efforts to support the company in order to acquire distinguished position amidst the dependable Manufacturers & Exporters of Welding Consumables.

They have state-of-the-art infrastructure which is backed with technologically advanced tools and machines that assist in the quality and quantity production of the Welding Consumables. Their robust infrastructural base has played a vital role in strengthening the market position of the company.

Their product profile includes SS MIG & TIG wires Bright, Matt & Semi Bright finishes, stainless MIG wires are manufactured from 0.80 mm to 1.60 mm diameter. TIG welding, Stainless steel TIG welding wires ranging from 1.20 mm to 5.00 mm diameter are manufactured under AWS & EN standard. Grades and sizes of each wire above the sizes 1.6 mm are embossed on both the sides.

They are looked upon as one of the prominent Stainless Steel Electrodes Manufacturers & Exporters

**Modi Hitech India Ltd.**

H. O.: 813, Modi Tower, 98 Nehru Place, New Delhi - 110019

Email id - [mhi@gmmarc.com](mailto:mhi@gmmarc.com)

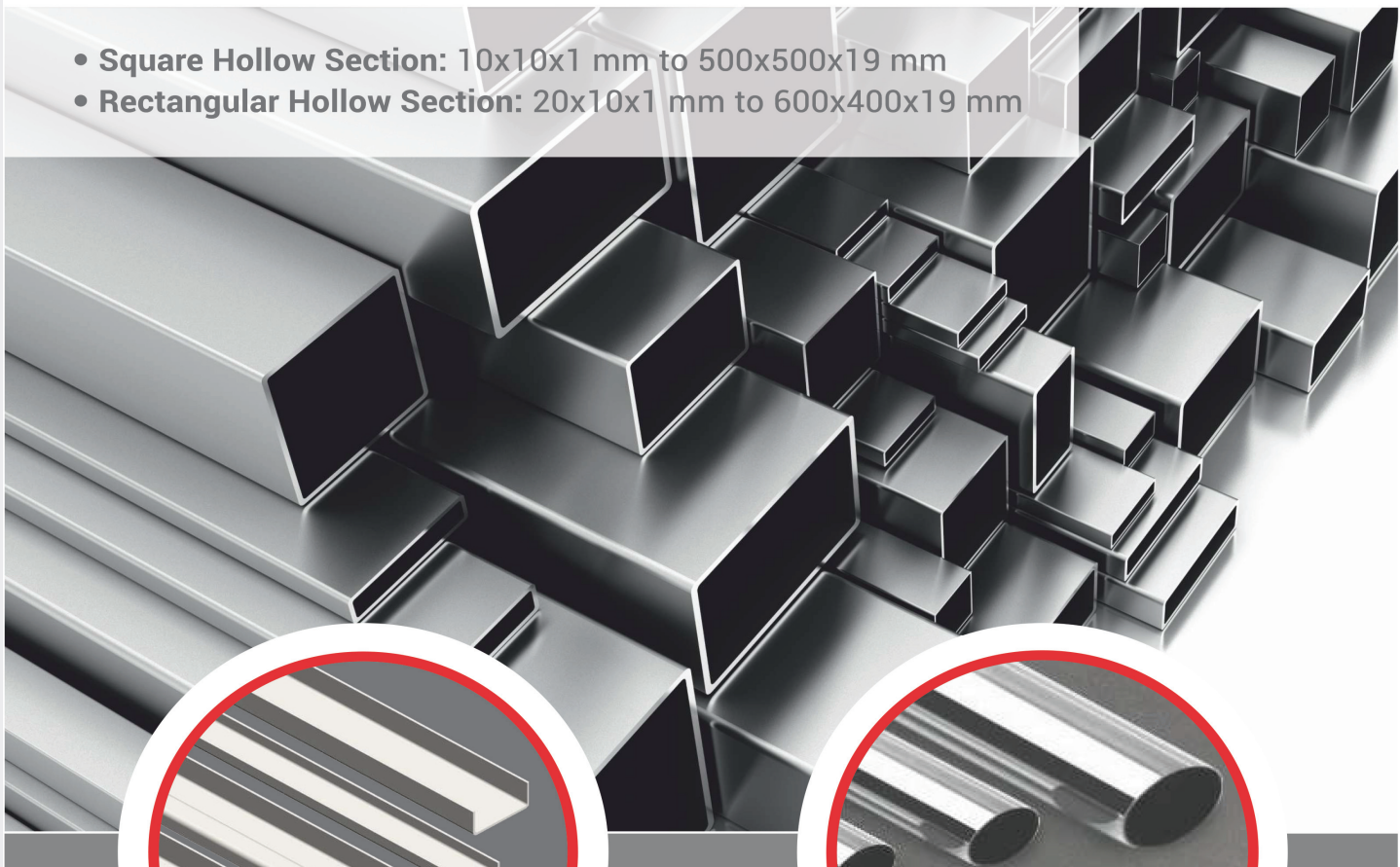
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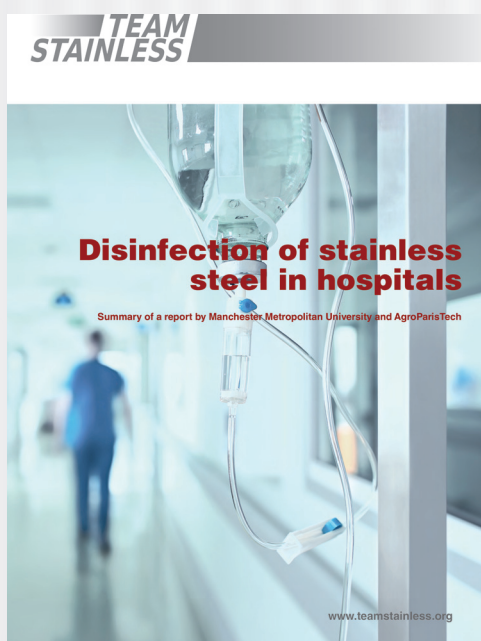


## Stainless Steel in Healthcare and Disinfection

World Health Organisation (WHO) has termed Hospital Acquired Infections (HAI) as the most frequent infection affecting healthcare.

Operation Theater, ICU etc are disinfected by a proper regime by most hospitals. However other areas such as Out-Patient Departments and wards are not disinfected so rigorously and walls, floors, handrails, tables, beds and bathrooms etc. are found infected very often.

Team Stainless (a group of ISSF, IMOA, NI, INFC, EUROFER and ICDA) commissioned a study by Manchester Metropolitan University and AgroParis Tech to examine the effectiveness of disinfection on new as well as old Stainless Steel surfaces. Expert advice and proprietary cleaning products were provided by Laboratories ANIOS. Study was conducted on 2B finish and brushed finish of grade 304 and 316.



As is well known fact that SS can be produced to have smooth and non-absorbent surface and is not corroded by clinical disinfectant, the study found that SS surface can be disinfected and sterilized to 99.9%. This confirms the effectiveness

of disinfecting Stainless Steel against HAI and establish suitability as a material for use in clinical environment. (Details at [www.teamstainless.org](http://www.teamstainless.org))

### Attention Readers !

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

## Tailpiece



The GDP growth of 7.7% for Jan-Mar 2018 quarter has brought cheers for the economy. Higher growth on the back of revival in manufacturing and construction is reflected in demand pick-up for steel, including stainless steel. Sustained efforts by the industry and government

on promoting stainless steel continues to drive higher consumption. Successful resolutions of some of the NPA's of banks for steel sector, under insolvency and bankruptcy code, has raised the prospects of reviving the investment cycle for the industry.

Indian Stainless Steel Industry is well placed to meet the rising demand. However, Indian market continues to be target of the major stainless steel producing countries, who are facing slowdown in their own regions. Trade action on Indian stainless steel products by US and EU can also impact us. Our objective continues to be encouraging domestic production in line with "Make in India", which generates greater value and employment in the country. We will continue to work with our members and the Government to improve the enabling environment for our industry.

Stainless Steel rebars is the new product, which can provide long term sustainable construction solution under difficult environmental condition such as coastal and marine applications. ISSDA looks forward to further educating customers on this important product, whose time has come.

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

## Disclaimer

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