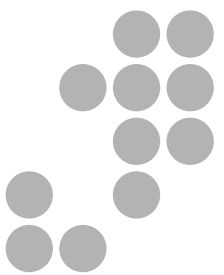
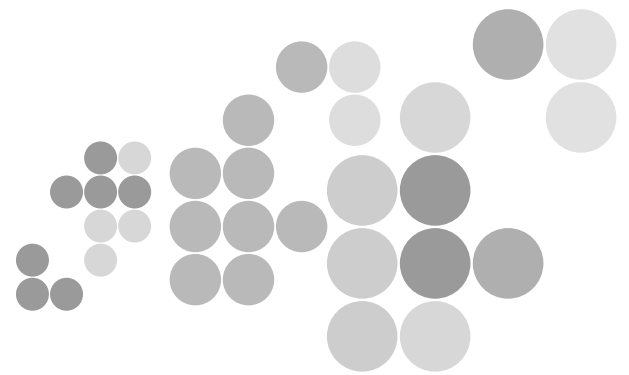


ISMT



World class manufacturer of seamless tubes,
tube based products and alloy steels



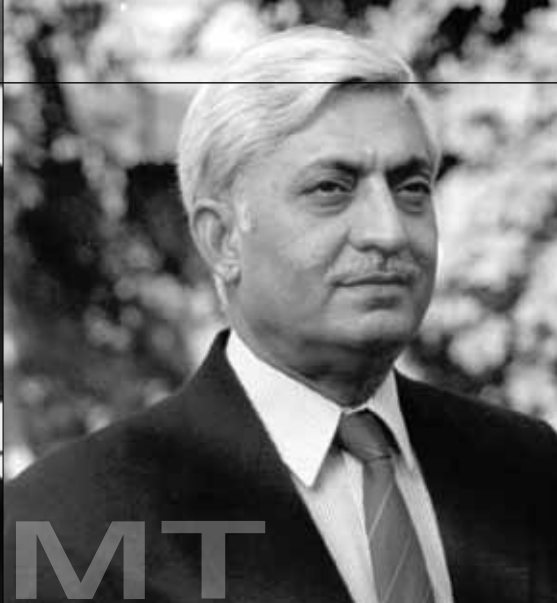
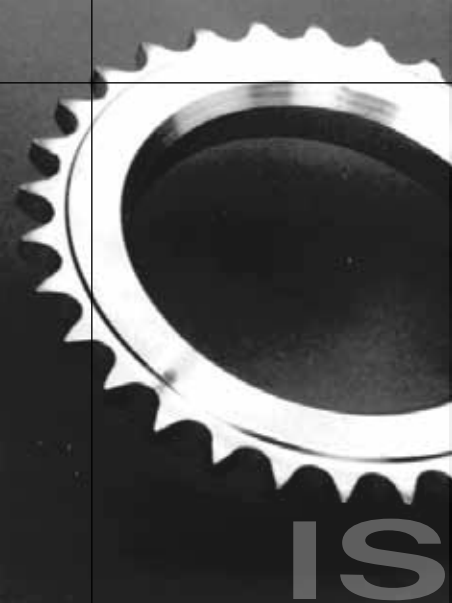
ISMT LIMITED
Solutions You Can Trust



VISION

“ TO BE THE MOST
SOUGHT AFTER, EFFICIENT,
PROFITABLE AND
RESPECTED PRODUCER
GLOBALLY OF PRECISION
SEAMLESS TUBES AND
ALLOY STEELS. ”

- B. R. Taneja



ISMT

ISMT has evolved from a being niche manufacturer of seamless tubes catering exclusively to the automobile and bearing markets in India to a company that supplies an extremely wide variety of engineering steels, specialized seamless tubes, and machined components to companies all over the world.

We aim to be a global leader in this business. Hence our unrelenting focus on improving quality, improving processes, and introducing new products - all with the common aim of adding more value to our customers.

Our endeavor is to create lasting relationships built on trust, cooperation, and mutual respect. For this we hold ourselves to the highest standards of customer service, social and environmental responsibility, and ethics. We invite you to do the same.

“ Our endeavor is to create lasting relationships built on trust, cooperation, and mutual respect. ”

HISTORY



1980

1995

2000

HISTORY



In 1980, ISMT began life as The Indian Seamless Metal Tubes Limited. At the time, the company operated one Assel Mill with an installed capacity of 15,000 metric tons per annum. Subsequently, in 1990 the production capacity was increase to 50,000 metric tons per annum with the addition of a second Assel Mill.

In 1995, The Indian Seamless Metal Tubes Limited launched a new company, Indian Seamless Steels and Alloys Ltd. (ISSAL), to produce alloy steel, the raw material used in the manufacture of seamless tubes, giving the company better control over product quality as well as deliveries.

In 2000, The Indian Seamless Metal Tubes Limited acquired Kalyani Seamless Tubes Ltd. (KSTL), a competing manufacturer of seamless tubes. The combined entity, which retained the name The Indian Seamless Metal Tubes Limited, not only had a larger capacity (150,000 metric tons per annum) , but also a much wider size range (from 6mm to 273mm).



2005

2007

2008

2012



HISTORY

In 2005, The Indian Seamless Metal Tubes Limited and Indian Seamless Steels and Alloys Ltd merged to form ISMT Limited

In 2007, ISMT acquired Structo Hydraulics AB. Based at Storfors in Sweden, Structo is among Europe's leading suppliers of tubes and engineering products for the hydraulic cylinder industry. Structo Hydraulics AB has more than 400 years experience in the field of iron and steel processing. Structo's product range includes cold drawn seamless tubes, cold drawn welded tubes, roller burnished cylinder tubes, cold formed tubes, and components.

In 2008, ISMT added a brand new PQF seamless tube mill. With this addition ISMT's tube making capacity increased from 150,000 MT/annum to 465,000 MT/annum. Simultaneously, Steel making capacity has also been increased from 250,000 MT/annum to 350,000 MT/annum with the addition of a second Ladle Refining Furnace.

In 2012 ISMT commissioned a 40 MW Captive Power Plant further enhancing the self sufficiency of the overall business while also reducing operating costs.

HISTORY



M



“ The combination of Assel Mills, a PQF Mill, and a Steel Mill puts ISMT in a unique position to cater to the lower volume engineering and bearing segments as well as to the higher volume pressure tube and OCTG markets. ”

MARKET FOCUS

TUBES

ISMT's tubes are ideal for applications such as the manufacture of bearings, automobile components, drill rods, hydraulic cylinders, gas cylinders, boilers, etc. Apart from seamless tubes, ISMT also manufactures a wide range of value added products made from tubes for each of these industries. These include items such as bearing rings, gear blanks, shifter sleeves, cages for constant velocity joints, swaged & machined axles, threaded and coupled casings, couplings and a host of similar products.

STEEL

ISMT is the leading producer of bearing steels in India with over 70% market share. The quality consciousness that the bearing industry necessarily demands has enabled ISMT to extend that same culture to other product lines and thereby carve out a niche as a specialized producer of carbon and alloy steels. Today, in addition to bearing steels we produce a vast array of specialized high-quality steels for the automotive industry, the forging industry, for textile machinery, fasteners and various other applications. All our steel is produced through the Electric Arc Furnace route, is ladle refined, vacuum degassed, continuous cast and rolled.



Manufacturing Units:

Ahmednagar, Baramati, Jejuri (India), Storfors (Sweden)



Sales Offices:

Pune (India), Storfors (Sweden), Stuttgart (Germany), Leicester (UK)



Sales Representatives:

Charlotte, Houston, Cleveland, New York (USA), Milan (Italy)



CUSTOMER FOCUS

ISMT has a strong engineering focus and invests heavily in research and development. We stand committed to adding genuine value to our customers. The R&D, Product Support and Marketing teams at ISMT have been organized along Product Application Verticals. Whether it be drill rods, bearings, or automotive axles, at ISMT we try to understand your specific product needs and tailor make our steels and tubes so that we can help you save costs, increase productivity, and stay competitive in a dynamic market environment – as an integrated producer of steel and tubes we are in a unique position to do so.

We have developed new alloy steels that have helped our customers reduce costs while maintaining mechanical properties; we have designed special tubes for the drilling industry that have low residual stresses and therefore improved product life; and we have developed special shaped tubes for customers to reduce machining costs. These are but a few examples of our efforts to work in concert with our customers and thereby add value to them.

TECHNOLOGY PROCESS GROUP

Our newly formed Technology Process Group (TPG), a combination of our best and most experienced engineers, works with our customers to understand their applications and tune our production processes to suit the requirements of the application. Our team is mandated to help our customers reduce costs-the team's performance is measured by their ability to deliver on this promise.

24X7 LOCAL SUPPORT

With multiple offices, stocking locations, and logistics partners across the globe we are in a position to service our customers locally. Wherever you are, we take it upon ourselves to provide you secure, on-time delivery, and 24 x 7 product support.



“ ISMT’s Vision, Core Values, and Mission statements are built around a core philosophy of being a responsible corporate entity, being the best at whatever we do, and keeping pace with change. ”



VISION

“To be the most sought after, efficient, profitable and respected producer globally of precision seamless tubes and alloy steels.”
B.R. Taneja,

CORE VALUES

- Integrity
- Honesty
- Fairness
- Secularity
- Diversity

MISSION

To produce the highest quality steel, seamless tubes and tubular products for the Bearing, Automotive, Mining, General Engineering, Energy and ‘High Value OCTG’ sectors and to build global market share globally in these sectors.

To provide the best value proposition in terms of cost and quality of product/service to our customers in the industry. To do so through a wholehearted commitment to the Quality Systems.

To maximize the utilization of our assets as measured by ‘Contribution’ generated.

To create a working environment that encourages creativity, empowers individuals, creates accountability and rewards performance. To create a self learning organization that gathers knowledge and reacts quickly to changes in customer expectations and the environment.

To play a pro-active and responsible role in social development and in environmental protection within our sphere of influence.





PEOPLE



Our core competence resides in our people. Therefore, we endeavour to create an organization that empowers people, encourages creativity, builds leadership skills and rewards performance. ISMT's human resource policies are structured around and measured against these corporate objectives.



In keeping with these goals, we have launched an in-house training centre, the ISMT Centre of Excellence (ICE). Located on a 13 acre campus, ICE is a full-fledged residential training facility equipped with computer labs, classrooms, a library and recreational facilities. The objective of this institute is to act as a central resource and repository for collecting and disseminating knowledge within the organisation.

Every graduate engineer joining ISMT undergoes a six month, paid, intensive training and orientation programme at ICE followed by three months of on-the-job training. In addition, ICE provides training to all existing managers as part of an effort to periodically upgrade their skills.



SOCIAL RESPONSIBILITY

As an integral part of our mission to play a pro-active and responsible role in social development and in environmental protection we have developed a focused and pragmatic agenda. We have a dedicated Corporate Social Responsibility department that works towards fulfilling these objectives by means of various events, campaigns and policy initiatives to improve the living and working standards as well as awareness levels of our employees and local communities.



TUBE DIVISION FACILITIES

The tube plants of ISMT at Ahmednagar and Baramati are both within a radius of 100 kms of Pune, where ISMT is headquartered. Each of these locations is equipped with state-of-the-art tube making, as well as finishing and testing facilities which include:

HOT FINISHING EQUIPMENT

- Piercing Mills
- PQF Mill
- Assel Mills
- Stretch Reducing Mills
- Hot Sizing Mills

COLD FINISHING EQUIPMENT

- Cold Pilger Mills
- Cold Draw Benches
- Cold Sizing Mills

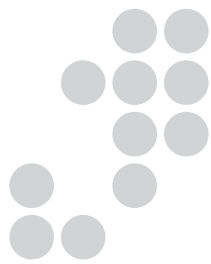
FINISHING FACILITIES

- Heat Treatment Furnaces (Normalizing, Annealing, Bright Annealing, Spheroidizing, Quench & Tempering)
- End Finishing Machines (Cutting, Threading, Beveling, Upsetting)
- Peeling TIR Machines
- Cold Ring Rolling Machines (Bad Deuben)
- Swaging Machines
- Stenciling & Lacquering Machines

INSPECTION & TESTING FACILITIES

- Ultrasonic Testing
- Eddy Current Testing
- Magnetic Particle Inspection
- Hydro-testing
- Leakage Flux Testing
- Chemical, Mechanical & Metallurgical testing

1
2
3



TUBE PRODUCT RANGE

4
5



With a unique combination of Assel Mills and a PQF mill, ISMT is easily one of the largest and most diversified manufacturers of specialized seamless tubes in the world. We produce both Hot-finished as well as Cold-finished seamless tubes ranging from an outside diameter of 6mm to 273mm. Our tubes are used in a variety of applications such as the manufacture of auto-components, bearing races, OCTG products, drill rods, boilers, heat exchangers etc.

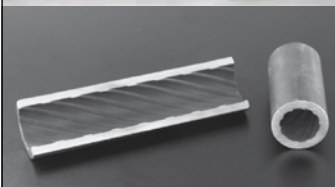
Apart from tubes ISMT manufactures a variety of value added products such as cold rolled and machined rings for bearings and constant velocity (CV) joints; swaged and machined axles for trucks; steering columns for two-wheelers; and ready-to-hone tubes for hydraulic cylinders.

6
7



8 product pictures with numbered points explaining what is in each of these pictures

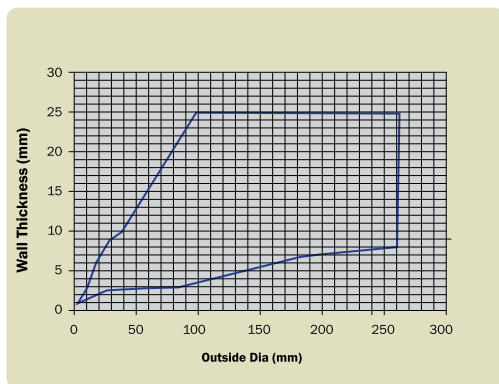
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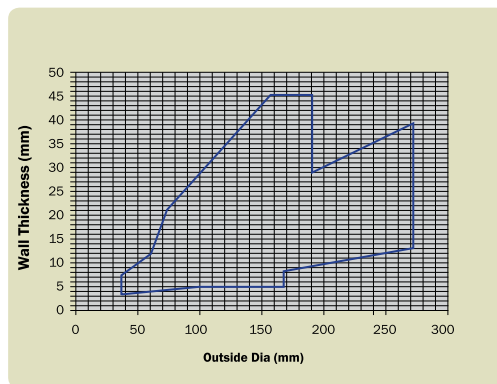
- 1- Cages for constant velocity joints
- 2- Shaped tubes
- 3- Multi-track sleeves for linear bearings
- 4- Spindle axles for automobiles
- 5- Starter gears for automobiles
- 6- Inner races for bearings
- 7- OCTG coupling
- 8- Rifled tube

TUBE PRODUCT RANGE

COLD FINISHED TUBES SIZE RANGE GRAPH



HOT FINISHED TUBES SIZE RANGE GRAPH



TUBE MAKING PROCESSES

HOT FINISHING

Hot finished tubes at ISMT are produced either through the Assel Mill process or through a PQF mill. Round steel billets of specific lengths are first heated in a rotary hearth furnace. After heating, these billets are descaled, end-face centered, and passed through a cross-roll Piercing Mill to produce rough hollow blooms.

The hollow blooms are then rolled over a mandrel either through a three roll Assel Mill or through a newly installed PQF Mill to produce hot finished tubes.

If required these tubes are passed through a hot-sizing or stretch reducing mill to produce tubes of intermediate dimensions. Hot finished tubes are either delivered as is or further cold processed.

The Assel Mill is the ideal process for producing low volume customized tubes with a high dimensional accuracy and excellent concentricity. As a result, these tubes are ideal for the manufacture of items such as bearing rings, cages for constant velocity joints (CV cages), automobile parts, etc.

The PQF mill on the other hand is ideal for producing large volumes of very accurately sized tubes. This process is ideal for producing Pressure Tubes, OCTG tubes and for other applications where large volumes are required.

COLD DRAWING

In Cold Drawing, hot finished tubes are surface treated and then drawn through the gap between a reducing die and a central plug (or a mandrel) thereby reducing both the inside and outside diameters and polishing both internal and external surfaces of the tubes to achieve close final tolerances.



PROCESSES



COLD PILGERING

In the Cold Pilgering (Rotorolling) process, the hot finished tube is reduced by rolling and elongating the tube stepwise over a stationary tapered mandrel. Two rolls, each with a tapering semi-circular groove running along the circumference embrace the tube from above and below and rock back and forth over the tube (the pass length) while a stationary tapering mandrel is held in the centre of the tube. At the beginning of the stroke (pass) the circular section formed between the grooves of the two opposing rolls corresponds to the diameter of the ingoing tube and to the thickest section of the mandrel. As the rolls move forward over the tube the circular section reduces in area until, at the end of the pass length the circular section corresponds to the finished inner diameter of the tube. The tube elongation is achieved by reduction of the outer diameter as well as the wall thickness of the ingoing tubes. The Cold Pilgered tube is characterized by very small dimensional variations and a very high surface quality. Furthermore, the high level of cold working (up to 70%) results in very high hardness levels and excellent machinability.



OTHER PROCESSES

Subsequent to the manufacture of tubes, ISMT uses a variety of finishing processes to produce value added products such as rings for bearings and CV cages, swaged and machined axles for trucks / trailers, couplings for OCTG products, and drill rods for mining.

Some of the processes used are:

- Cold Ring Rolling: ISMT has a number of Bad Deuben machines which are capable of cold rolling rings to produce near-net shaped annular components. This process has almost zero wastage and yields a product with very tight tolerances.
- Machining: ISMT has a variety of in-house machining facilities and has strategic manufacturing relationships with accredited vendors allowing it to meet virtually any customer requirement at short notice.
- Heat Treatment: Annealing, Hardening, Normalizing, Spheroidizing
- Peeling
- Swaging / Upsetting: ISMT uses this process to produce Axle ends as well as Tubing for the OCTG industry.



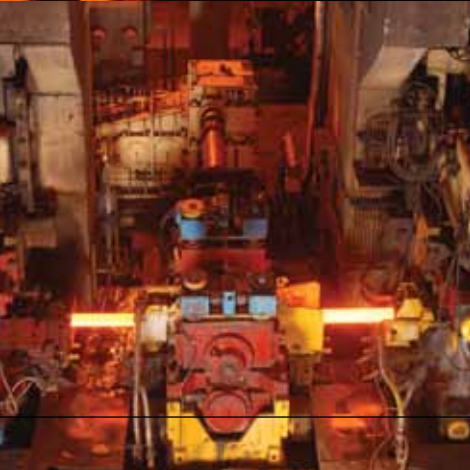
STEEL DIVISION FACILITIES

ISMT has one of the most modern alloy steel plants in India. The factory, located at Jejuri (within a 100 km radius of ISMT's Tube plants) has a capacity of 350,000 MT per annum. The primary production facilities include an Electric Arc Furnace, a Ladle Refining Furnace, a Vacuum Degassing Plant, a Continuous Caster and a twelve stand "no-twist" Rolling Mill. Along with these facilities, there are a variety of finishing and testing equipment that enable the company to meet even the most stringent of customer requirements.

ISMT's Steel Division has established itself as one of the leading suppliers of carbon and alloy steels in India. The company is QS 9000 and ISO 9002 approved. ISMT's product mix includes both rounds as well as round cornered squares. These items form the basic raw material inputs for industries such as forging, seamless tube making, automobile and auto-ancillaries, textile machinery, fasteners and other engineering applications.

SALIENT FEATURES OF THE PLANT

- Computer-controlled addition of Ferro Alloys in LRF
- 100% in-line Vacuum Degassing
- Automatic Mould Level Controller (AMLC) in Caster
- Two Strand Round Caster with 12 meter and 18 meter radius
- In mould EMS in CCM resulting in uniform macro structure
- Continuous Rolling Mill with 12 stands coupled with descaler



STEEL DIVISION PROCESSES

PROCESS	EQUIPMENTS / PARAMETERS
Scrap / Metallics	Continuous DRI Addition / Bucket Charging
Primary Melting	50MT, UHP - EAS, EBT & Auto Melt Control
Secondary Melting	50MT LRF, Auto FE-Alloy Addition, Continuous Argon Purging
Vacuum Degassing	Vacuum Level 1 Mbar. 100% Heats are Processed Through VD to Ensure Steel Cleanliness
Continuous Casting	2 Strand, 12 & 18 Metres Radius, AMLC, Mould EMS & Computerised Process Control, Flying Tundish
Walking Hearth Furnace	Oil Fired, PLC Controlled
Descaler	200 Bar, HP Water Pump
Continuous Rolling Mill	12 Strand; PLC Controlled
Inspection	MPI, Pickling, ECT, Ultrasonic & Visual & Laboratory
Heat Treatment	Four 15MT Electrically Heated Furnace
Metallurgical Testing	Laboratory Equipments
Finishing / Despatch	



STEEL PRODUCT RANGE

With a relatively low heat size (50 tons) in the Electric Arc Furnace, the company has the ability to produce virtually any grade of steel, even in small batch quantities for a particular customer.

However the typical grades produced are as follows:

Plain Carbon Steels

SAE 1008, SAE 1010, SAE 1012, SAE 1019, SAE 1026, SAE 1035, SAE 1040, SAE 1045, SAE 1518, 070M20, 080M40, 080M46, 070M55, CK35, CK45, CK55, CK60

Case Hardening Steels

665M23, 635M15, 637M17, 815M17, 822M17, SAE 8617, SAE 8620, 8627, 15Cr3, 16MnCr5, 20MnCr5, 15CrNi6, SCM415, SCM420, SCM421

Spring Steels

55Si7, 60Si7, 65Si7, 37MnSi5, 50CrV4, 38XC, 50Cr4V2, 51CrMoV4

Free Cutting Steels

SAE 1117, SAE 1137, SAE 1140, SAE 1141, 216M36, 220M07

Ball Bearing Steels

SAE 52100, 100Cr6, 103Cr2, SUJ2

Micro Alloyed Steels

HMnV, 38MnSiVS5, 49MnVS3

Other Alloy Steels

SAE4130, SAE4135, SAE4140, SAE4340, 817M40, 34Cr4, 37Cr4, 41Cr4, 25CrMo5, 42CrMo4, 40NiCrMo4, 40NiCrMo15, SCM435, SCM440, SA182-F11, SA182-F12, T11, T22, T23, T5, T9, T91, T92

Supply Conditions

As rolled, heat treated (Black/Bright), quench & tempered.

PRODUCT

Cast Rounds

160, 180, 200, 225

Rolled Products

25, 25.4, 26.4, 28.3, 30, 32, 34, 36, 38

40, 42, 45, 48, 50, 52, 56, 60, 63, 65, 70, 75, 80, 90, 95,

105, 115, 125, 137, 150, 170

Rolled Round
Cornered Squares

45, 50, 52, 55, 60, 63, 65, 70, 75

SIZE RANGE (DIA OR SIDE IN MM)



QUALITY ASSURANCE AND APPROVALS

At ISMT, quality encompasses all processes within the organisation right from sourcing raw material and qualifying vendors to delivering and supporting the final product. Even though the company is ISO:2004, ISO/TS16949:2009, and OHSAS 18001:2007 certified, it strives to exceed the standards set by these agencies. With this objective in mind, ISMT has adopted the Kaizen philosophy of continuous improvement.

Among the host of application specific quality certifications, ISMT: has been granted the rights to use the API monogram for its OCTG products; is certified by TUV Nord under Pressure Equipment Directives and Construction Equipment Directives; and has IBR certification from the Central Boilers Board (Govt. of India). In addition ISMT has Marine Approval Certification by Lloyd's Register Asia.

ISMT also has specific vendor approvals from a number of leading international companies. Based on individual requirements, ISMT is willing to work with all its potential customers to obtain such approvals.





ENVIRONMENT



ISMT STRONGLY BELIEVES IN THE NEED TO MAINTAIN AND IMPROVE THE QUALITY OF THE ENVIRONMENT. THE COMPANY SHALL THEREFORE STRIVE TO ENSURE THAT ITS OPERATIONS COMPLY WITH ALL APPLICABLE LAWS AND STANDARDS, HAVE NO ADVERSE IMPACT ON THE ENVIRONMENT AND WHERE POSSIBLE MAKE A POSITIVE CONTRIBUTION TO IMPROVING THE QUALITY OF THE ENVIRONMENT.

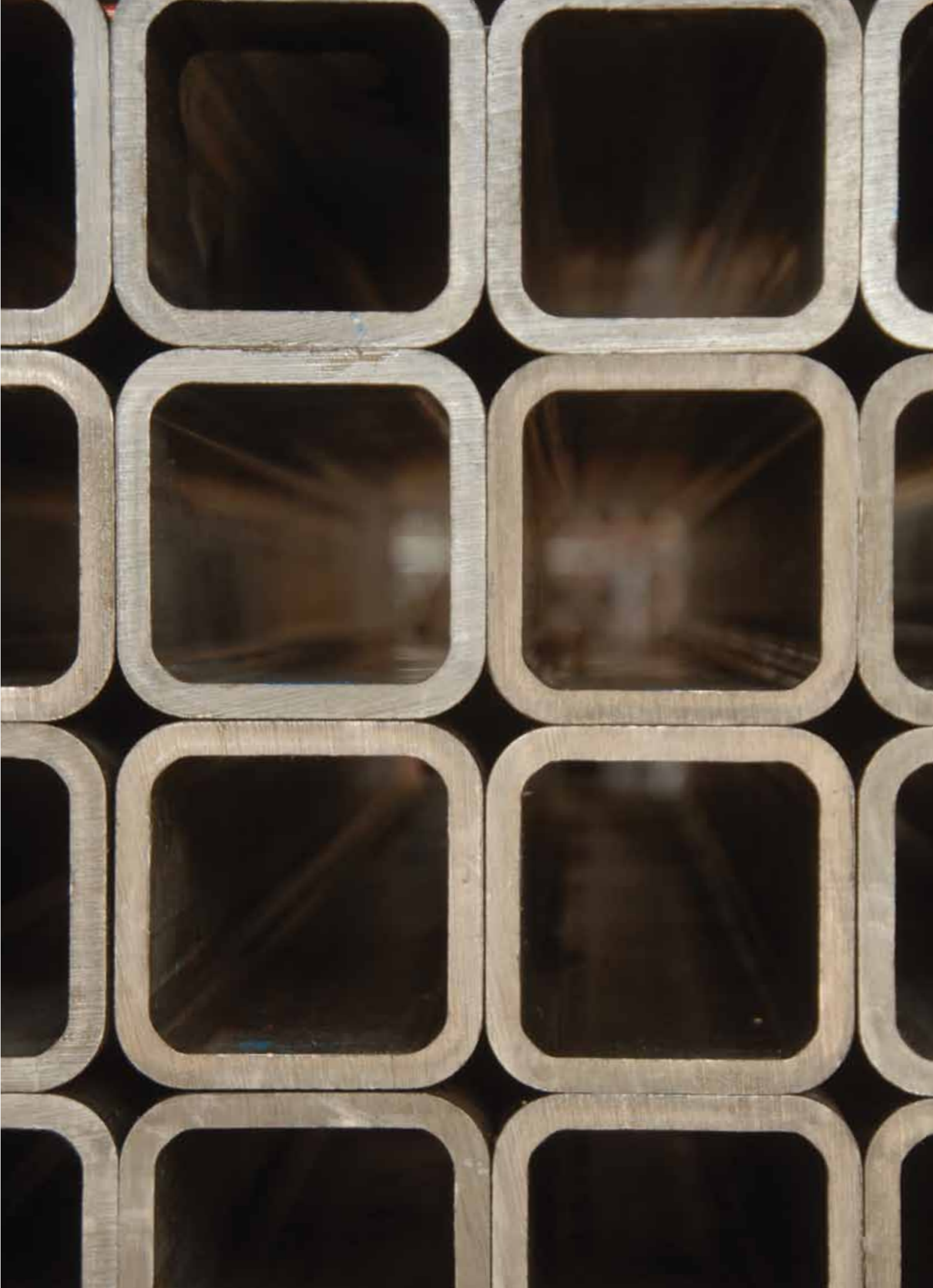


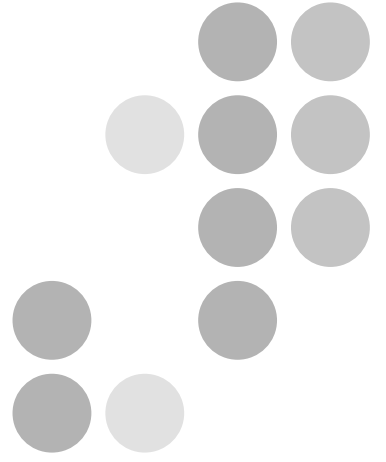
HEALTH AND SAFETY



OUR PEOPLE ARE OUR MOST IMPORTANT ASSET. PROTECTION OF THEIR HEALTH AND SAFETY IS OF VITAL IMPORTANCE TO US. WE COMPLY WITH ALL APPLICABLE LAWS AND RELEVANT INDUSTRY STANDARDS OF PRACTICE CONCERNING PROTECTION OF HEALTH AND SAFETY OF OUR EMPLOYEES IN THE WORK PLACE AND OTHER PERSONS AFFECTED BY OUR BUSINESS ACTIVITIES.







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