



insider

QUARTERLY NEWSLETTER | ISSUE #2 | FEBRUARY 2023

EXPORT AND INTERNATIONAL TRADE

The Big5 Exhibition 2022, Dubai

CORPORATE NEWS

Senate Committee's Visit to ISL Service Center

CUSTOMER ENGAGEMENT

ISL Fabricators' Conference 2023

COVER STORY



From Ore to More

Since the Bessemer Process, steelmaking has come a long way. But the possibilities of improving and varying steel types have maybe come an even longer way.

HIGHLIGHTS

ISL Sales Conference 2023

Glimpses of ISL Annual Sales Conference 2022 that took place in Muzaffarabad, Pakistan. ISL Management, Regional and Export Sales and Marketing Teams exchanged goals, challenges and strategies for the current year, and for the coming times.

TRAINING AND DEVELOPMENT

Surrendering the 'Me' for the 'We'

A training to emphasize the importance of collaboration, communication and teamwork to achieve improved performance and productivity to meet Company's objectives.

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EDITOR'S NOTE

Happy New Year!

We hope this edition of ISL Insider finds you well.

As we enter into a new year, it is important to reflect on the past and look forward to the future. We sincerely hope that this year will bring us and our loved ones good health, happiness, success and we all must be excited for the opportunities and possibilities that the new year holds.

Delivering at our roles at International Steels Limited, we have continued to push forward and make progress even in these difficult times. The past quarter has been challenging for all of us with the ongoing economic conditions. It is more important than ever to come together as a team and support each other. Let's continue to work together, and stay motivated as we navigate our way through these challenges. Together, we can achieve our goals and come out stronger on the other side while making a positive impact in the industry.

At International Steels Limited, we continue to strive for excellence and growth, and we are excited to share our latest developments and achievements with you in this newsletter.

We encourage all employees to share their articles, thoughts, ideas and contributions to the newsletter. Your participation helps to keep our team informed, connected and engaged.

We are looking forward to hearing from you!

Best Regards,

**Editorial Team,
ISL Insider**

We are looking for inspiring articles to feature in our upcoming newsletter. Share your feedback, insights, business and customer-based case studies, company and industry-related articles at madiha.habib@isl.com.pk.

HAPPY NEW YEAR

2022

2023

2024

WINNING TOGETHER

Awards and Achievements

Pakistan Stock Exchange's Top 25 Companies Award 2021



Pakistan Stock Exchange (PSX) announced top 25 Companies Award for the year 2021, on September 12, 2022.

Every year, the PSX announces the names of the twenty-five (25) leading, publicly traded companies which have been adjudged in accordance with a comprehensive selection criteria approved by the PSX Board of Directors.

This listing honor and recognize companies who have met and exceeded benchmark quantitative and qualitative criteria, Pakistan Stock Exchange presents them with a highly regarded and prestigious award to highlight and celebrate their achievements.

The companies achieving this distinction have excelled in both corporate governance and financial performance. The listed companies who win these awards are not only among the best-performing companies in Pakistan but are also comparable to the best-performing organizations internationally.

45th Export Awards of FPCCI Top Exporters



For the fifth time, ISL won "Export Performance Award" at the prestigious Federation of Pakistan Chamber of Commerce and Industry FPCCI's 45th Export Awards for the FY 2020-21.

The award was conferred by His Excellency, President of Pakistan, Dr. Arif Alvi on September 29, 2022 at President House (Aiwan-e-Sadar), Islamabad. Mr. Mustafa Khan (GM, Sales and Marketing) received the award on behalf of ISL.

37th MAP Corporate Excellence Award



ISL won the "Corporate Excellence Award" in the "Engineering Category" for the fourth year in a row.

ISL's CEO Mr. Yousuf H. Mirza received the award at the 37th year of the Corporate Excellence Awards organized by the Management Association of Pakistan (MAP). Former Finance Minister Miftah Ismail was the Chief Guest of the event and distributed awards among the winners. The event was held in Karachi on Monday, October 3, 2022.

AAMO 2nd Asian Management Games 2022



The Asian Management Games (AMG) is one of the annual activities of Asian Association of Management Organizations (AAMO), and aims to connect different management organizations in the Asian Pacific region.

ISL participated in the The Asian Management Games for the second time in 2022 and the team got recognition for securing 3rd position, at the 37th Chapter of The Management Association of Pakistan (MAP) Awards. Pakistani political economist and Ex-Federal Minister of Finance, Mr. Miftah Ismail conferred shields among the ISL team members who competed in the 2nd Asian Management Awards:

- | | |
|-------------------------------|--|
| ▪ Mr. Saad Alam - Team Leader | (Senior Manager - ISL Finance Department) |
| ▪ Mr. Hassan Arif | (Manager, ISL Sales Department) |
| ▪ Ms. Madiha Habib | (Deputy Manager, ISL Marketing Department) |
| ▪ Mr. Haider Ali | (Deputy Manager, Production) |
| ▪ Mr. Rashid Ali | (Assistant Manager, Procurement) |



About The Asian Management Games

The Asian Management Games serve as an effective tool for participating managers to understand various complexities involved in running modern day corporations. They offer a chance to experiment with decisions and strategies to achieve deeper insights into the processes of strategic decision making. The real-time simulation provides a realistic context for taking short term and long term business decisions, while creating a competitive scenario that closely reflects the real world.

Since interactions between various functional decisions is a feature of corporate reality, the Asian Management Games reflect the inter linkages of decisions, that are required to be taken under each period include production, quantity, price, R&D expenditure, sales promotion, investments, debt, equity, dividends etc.

EFP 9th Employer of the Year Award 2021



ISL wins 1st position in the Medium National Category at the "9th Employer of the Year Awards" for the year 2021.

The event was organized by Employers' Federation of Pakistan on 27 October 2022 in Karachi and the Honorable Federal Minister of Overseas Pakistani and Human Resource Department, Mr. Sajjad Hussain Turi graced the occasion as the Chief Guest and distributed the awards to the companies that demonstrated best practices in corporate and general management.



The Award Ceremony was held at Hotel Movenpick Karachi on the October 27, 2022, in which around 31 organizations from multiple sectors were awarded for their exceptional performances and responsible business practices in areas of Human Resource Management, Skill Development, Occupational Safety and Health, Industrial Laws Compliance, Corporate Social Responsibilities, Inclusivity, Women Empowerment, and Sustainable Development Goals.

TEAM BUILDING WORKSHOP

Surrendering the 'Me' For The 'We'



Conducted among apprentice to officer grade employees:

670 = 388

**Total Targeted
ISL Employees**

Grade Apprentice to G
Employees from
ISL factory

241

Grade 01 and above
Employees from
ISL Factory and
Head Office

41

Employees of
ISL Service
Center

Objective of the Training:

Surrendering the 'Me' for the 'We' workshop is designed to help employees understand the importance of teamwork and collaboration in achieving success in the workplace. The training focuses on putting the needs and goals of the team or organization above our own individual needs and goals, to work effectively as part of a team and contribute to the overall success of the organization.

Learning Outcomes:

Understanding the importance of teamwork

The understanding that the success of the team or organization is ultimately more important than any individual's success. Recognizing this can help shift the focus from individual success to collective success.

Communicating openly and listening actively

Open communication and active listening are key to creating a culture of trust and collaboration within the team and organization. By sharing your thoughts and ideas, and actively listening to the thoughts and ideas of others, we can help build a strong sense of teamwork.

Putting the team's needs before our own:

This means being willing to make sacrifices and compromises when necessary. It is important to be able to put the needs of the team or organization before our own personal needs and goals.

Leading by example

Adoption of the concept of surrendering personal goals for the collective goals, helps to reinforce teamwork and encourages other team members and subordinates to continue working together towards shared goals.

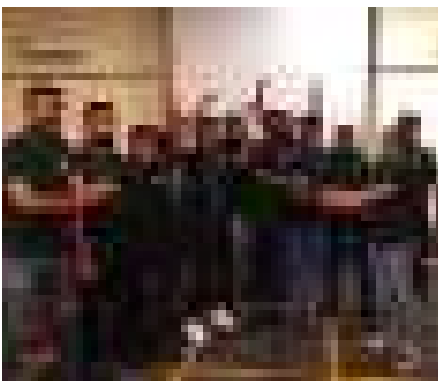
Being open to feedback with a growth mindset

Having a growth mindset means being open to learning and development. Being open to feedback is the key to continuous improvement, it helps to identify areas where we may need to make positive changes to better support the team or organization.

Embracing diversity

Embracing diversity within the team or organization allows for a wide range of perspectives and ideas to be considered, leading to better decision-making and more innovative solutions.

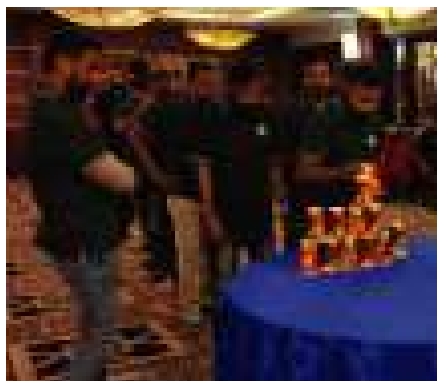
Surrender the 'Me' for the 'We' Workshop Grade Apprentice to G – ISL Factory



Surrender the 'Me' for the 'We' Workshop Grade Apprentice and Above – ISL Service Center



Surrender the 'Me' for the 'We' Workshop Grade Officer and Above – ISL Factory and ISL Head Office



CELEBRATING TOGETHER

Independence Day at ISL Head Office



CELEBRATING
75TH
 پاکستان
 ANNIVERSARY OF OUR HOMELAND



ISL and IIL celebrated the spirit of the 75th anniversary of Pakistan's Independence along with the management and corporate residents of Beaumont Plaza with great enthusiasm and fervour. The ceremony was organized by BPOOWA. During the ceremony, the national flag was hoisted and National Anthem was recited. The pledge to continue the struggle for a better tomorrow was also reiterated by all the participants of this ceremony.

CORPORATE EVENT

ISL Sales Conference 2022



The ISL Annual Sales Conference 2022 was a resounding success, with participants from the ISL Management, Regional, and Export Sales and Marketing teams coming together in Muzaffarabad, Pakistan from August 03 to 06, 2022.

During the conference, attendees exchanged valuable information, ideas, and viewpoints on the challenges faced during the past fiscal year.

They also discussed goals and strategies for the current year, and received closing remarks from our CEO, Mr. Yousuf Hussain Mirza, and COO, Mr. Samir Chinoy. These inspiring words evoked a new sense of motivation and purpose for the coming year.



One of the highlights of the conference was the opportunity for team members to collaborate and share their experiences and insights. The open and inclusive atmosphere of the conference helped to foster a sense of unity among all participants.

The conference also provided a platform to discuss the latest industry advancements and trends, to identify opportunities for growth and expansion.

International Steels Limited's management team was on hand to share their vision for the future and to answer questions from attendees. Overall, the ISL Annual Sales Conference 2022 was a valuable opportunity for team members to come together, share ideas, and work towards a common goal.

We would like to thank all participants for their contributions and look forward to another successful year at International Steels Limited.



Some glimpses of the ISL Sales Conference 2022



HEALTH, SAFETY AND ENVIRONMENT

Fire safety, Evacuation and Emergency Response Plan



On October 5, 2022, an awareness session on "Fire Safety, Evacuation, and Emergency Response Plan" was held at the ISL Service Center. The session was conducted by Dr. Tahir Baig Barlas and aimed to train both management and non-management employees on responding methods in case of a fire emergency.

The importance of fire safety and emergency response procedures cannot be overstated, as they can mean the difference between life and death in case of an emergency. The session covered important topics such as how to evacuate the building safely, how to use fire extinguishers, and how to call for emergency assistance.



Fire Mock Drill

To ensure the effectiveness of the emergency response procedure, a planned mock drill was conducted at the Service Center on the same day. The drill involved participation from employees, contractors, and other parties, and was designed to test the readiness and response of everyone involved in case of a real emergency.



It's important to remember that fire safety and emergency response procedures are crucial for protecting lives and property, and that regular training and drills are necessary to ensure that everyone knows what to do in case of an emergency. Fire mock drills are a crucial part of fire safety preparedness in any building or facility because:

- ***These drills are designed to simulate a fire emergency and test the readiness of both building occupants and emergency responders. During a fire mock drill, employees practice evacuating the building in an orderly and efficient manner, following established protocols, dedicated evacuation routes and procedures.***
- ***The drill also test the effectiveness of fire alarms and other safety systems, and provide an opportunity for emergency responders to practice their response to a fire emergency.***
- ***Regular fire mock drills help to ensure that everyone knows what to do in case of a real emergency and can reduce the risk of injury or death in the event of a fire.***

Overall, the sessions and the mock drill were impactful and provided valuable training for everyone involved and it also helped to identify any areas for improvement and allowed for adjustments to be made in the emergency response plan on individual and organizational level.

HEALTH, SAFETY AND ENVIRONMENT

Prevention of Slip, Trip and Falls at the Workplace



On December 28, 2022, an awareness session was organized at ISL Factory for employees, with the aim of ensuring a safe working environment for its employees. The session was facilitated by Dr. Tahir Baig Barlas, an expert in workplace safety.

The session aimed to educate non-management employees on the importance of proper housekeeping in preventing injuries at the workplace. Slip, trip, and fall accidents are some of the most common incidents that occur in the workplace, and they can result in serious injuries, including broken bones, sprains, and strains.

During the session, various strategies that employees can use to prevent slip, trip, and fall accidents were discussed, including keeping walkways and work areas free of clutter, proper maintenance of floors and stairs, and storing materials and equipment efficiently. Importance of good lighting and visibility in preventing accidents were also shared. Ways of safely walking on different surfaces, such as wet or slippery floors were discussed.



Creating Good Housekeeping Practices



Reducing Wet or Slippery Surfaces



Removing Obstacles in Aisles and Walkways



Wearing Proper Gear, Shoes and Clothing on floor



Using handrails on Staircases and Slopes

The session also touched on the importance of reporting any hazards or unsafe conditions to management immediately, as well as the importance of wearing appropriate footwear and clothing to reduce the risk of accidents. The employees left the session feeling more informed and prepared to work safely.

ISL is committed to providing a safe working environment for all its employees, and this session was just one of the many steps taken to achieve that goal.

LEARNING TOGETHER

Defensive Driving Course (DDC)

To promote safety and enhance the driving skills of its management employees, our company has been offering a mandatory Defensive Driving Course (DDC) affiliated by OSALP International. Aimed at equipping employees with the necessary knowledge and techniques for safe driving, the training is being offered to the management staff with grades MO and above.

Defensive driving is a technique that involves being aware of and anticipating potential hazards on the road. This includes being aware of other drivers, weather conditions, and road conditions.

Some key principles of defensive driving include staying alert and focused, maintaining a safe following distance, scanning the road ahead and to the sides, being prepared to react to unexpected situations, and obeying traffic laws. Additionally, defensive driving often includes being aware of potential hazards such as tailgating, reckless driving, and aggressive driving, and taking appropriate action to avoid these hazards.



Learning Outcomes:

- Improved driving skills
- Enhanced awareness
- Reduced risk of crashes
- Potential savings on car repairs
- Knowledge of traffic laws
- Anticipation of potential hazards on the road
- Lower traffic violations
- Reduced chances of getting traffic tickets and penalties



Refresher points from the DDC training that helps you maintaining one hundred percent attention to driving, the five seeing habits while driving are:



AIM HIGH IN STEERING

How do you do it?

Look down the road 30-120 seconds ahead.

What does it do for you?

Centers your vehicle in your lane.
Allows you to spot hazards early.



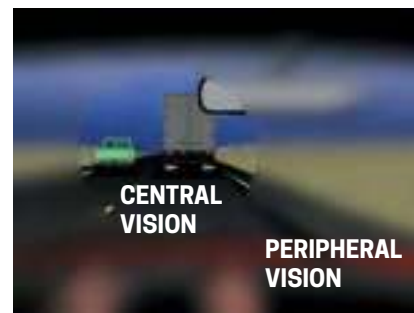
GET THE BIG PICTURE

How do you do it?

Continuously analyze what is going on around.

What does it do for you?

Smooths stops and turns.
Gives you time to adjust and protect yourself.



KEEP YOUR EYES MOVING

How do you do it?

Move your eyes every two seconds as you scan.
Check mirrors every 5-8 seconds.

What does it do for you?

Keeps you alert. Helps protect you in intersections.



LEAVE YOURSELF AN OUT

How do you do it?

Always plan an escape route in case the unexpected happens.

What does it do for you?

Gives you space on all four sides and always a space in front.



MAKE SURE THEY SEE YOU

How do you do it?

Communicate in traffic with your horn, lights and signals.

What does it do for you?

Establishes eye contact and avoids pedestrian and intersection collisions.

FROM ORE^{TO} MORE



Iron is one of the greatest gifts from God, as evidenced by the fact that there is a chapter in the Holy Quran named *Al-Hadid* (Iron). The absence of a chapter called *Adh-dhahab* (Gold) suggests that iron is more essential than gold, as human civilization would not be able to thrive without it.

Iron is the foundation of all arts and sciences, the driving force behind human development and progress, and the source of human strength.

As stated in the Holy Quran:

“We sent down iron, with its mighty power, and benefits for mankind” - Surah Al-Hadid - 25

The realization of iron's importance for human advancement and progress, as stated in this verse, is truly astounding, particularly considering that the importance of iron for human progress was not fully understood until the end of the 20th century.

Iron is a powerful reminder of the wonders of God's creation and the potential for human advancement, and it continues to inspire and shape our world today.

Ore, a naturally occurring deposit of valuable elements or compounds, is the key to extracting metals in a cost-effective and efficient manner. These valuable elements include a wide range of metals such as copper, platinum, iron, lead, gold, silver, aluminum, and nickel, among others.

Minerals, which are the naturally occurring metals in the earth's crust, are commonly found in combination with other elements.

The four most common ores are:

Iron: Hematite, Magnetite, Siderite, and Iron Pyrites
Aluminum: Bauxite and Kaolinite (a form of clay)

Copper: Copper Pyrites, Malachite, Cuprite, and Chalcopyrite

Zinc: Zinc Blend/Sphalerite, Calamine, and Zincite
When it comes to iron ores, the four most common types are Magnetite, Hematite, Limonite, and Siderite.

Magnetite contains 72.4% Fe
Hematite contains 69.9% Fe
Limonite contains 59.8% Fe
Siderite contains 48.2% Fe

It's worth noting that the percentage of iron in these ores can vary and this information is subject to change based on the location and quality of the deposits.

EXTRACTION OF METALS FROM ORE

Metallurgy is the science and technology of extracting valuable metals from their ores. The methods used to extract the metal from the ore depend on the nature of the ore and the impurities present in it. The process typically involves several steps, including:

Concentration of ore: Removing impurities and increasing the concentration of the metal in the ore.

Roasting: Converting sulfide ores into oxide ores, making them easier to extract.

Calcination: Heating the ore to a high temperature to remove volatile impurities.

Reduction: Reducing the metal ions in the ore to the metallic form.

Electrolysis: Passing an electric current through the ore to extract the metal.

Refining: This step involves purifying the metal to remove any remaining impurities.

Together, these steps make up the process of extracting metals from their ores, known as metallurgy. It's a complex process that requires a combination of scientific and technical knowledge to achieve the desired results.



EXTRACTION OF IRON FROM IRON ORE

IRON MAKING

The process of extracting iron from its ore, known as iron making, involves a series of steps to convert raw inputs of iron ore, coke, and lime into a usable form of iron.

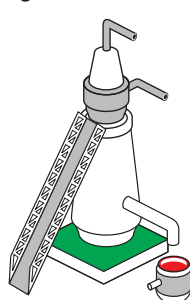
The first step in this process is the reduction of iron ore in a blast furnace, where heat and a lack of oxygen remove the oxygen from the iron oxide, leaving behind pure iron. However, this iron is still impure and contains various elements such as carbon, sulfur, phosphorus, and silicon. These impurities must be removed through a refining process, such as the removal of sulfur through the use of magnesium powder and the reduction of remaining impurities during steel making.

STEEL MAKING

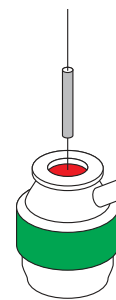
Steel making, the process of creating steel from iron, can be done through two methods: primary steel making and electric arc furnace.

The primary method, *BOF (Basic Oxygen Furnace)* via the blast furnace route, uses oxygen to convert the molten iron from the blast furnace into steel.

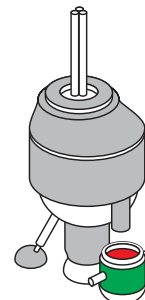
The other method, *EHF (Electric Arc Furnace)* uses an electric arc to heat and melt scrap steel and alloying agents, which are then refined into steel.



Blast Furnace



Basic Oxygen Furnace



Electric Arc Furnace

BASIC OXYGEN FURNACE (BOF)

The Basic Oxygen Furnace (BOF) is a process used to convert pig iron (molten iron from the Blast Furnace) into steel. The furnace is also known as a convertor. The process involves reducing carbon and other impurities from the iron, resulting in a lighter, more flexible, and rust-resistant metal called steel.

The Basic Oxygen Furnace (BOF) Process

In the BOF method, molten iron with 10% impurities (carbon, sulfur, phosphorus) from the Blast Furnace and recycled scrap are fed into the convertor. At high temperatures, oxygen is blown through the metal, reducing the carbon content to between 0-1.5% and reducing other impurities.

Steelmaking

In steelmaking, impurities such as nitrogen, silicon, phosphorus, sulfur, and excess carbon (the most important impurity) are removed from the sourced iron. Alloying elements such as manganese, nickel, chromium, carbon, and vanadium are added to produce different grades of steel.

Electric Arc Furnace (EAF) Method

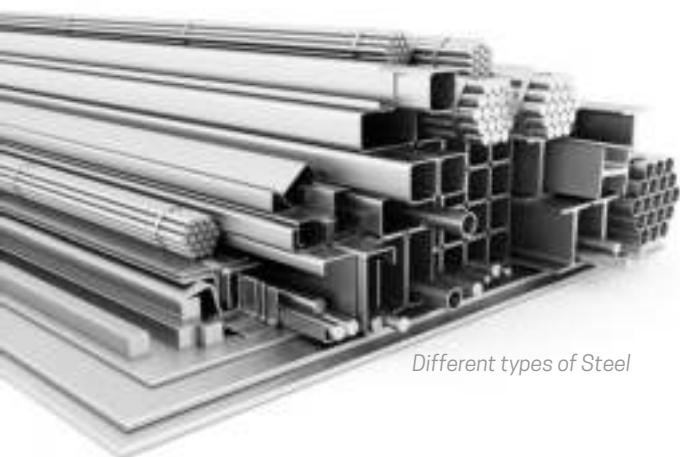
In the EAF method, steel scrap, DRI (Direct Reduced Iron), HBI (Hot Briqueted Iron), and solid pig iron are melted through high-power electric arcs (with temperatures of up to 1,650 degrees Celsius) in the electric arc furnace. Steel scrap is also melted in the induction furnace.

Secondary Steelmaking

Secondary steelmaking involves treating the molten steel produced from both BOS and EAF/Induction furnace routes to adjust the steel composition. This is done by adding or removing certain elements and/or manipulating the temperature and production environment.

The Four Main Types of Steel are:

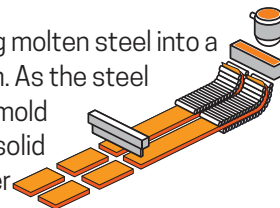
- Carbon steel
- Stainless steel
- Alloy steel
- Tool steel



Different types of Steel

CONTINUOUS CASTING

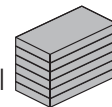
Continuous casting involves pouring molten steel into a mold in a continuous, steady stream. As the steel solidifies, it takes the shape of the mold and is continuously withdrawn as a solid strand, which is then cut into shorter lengths for further processing.



SLAB CASTING

Slab casting, on the other hand, involves pouring molten steel into a large, flat mold. The steel solidifies into a flat, rectangular shape known as a slab, which is then rolled or forged into other shapes as desired.

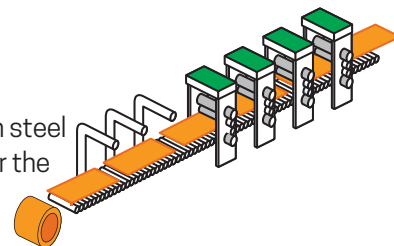
This method is typically used to produce steel for flat products, such as plates and sheets.



STEEL ROLLING

Rolling is an important step in steel manufacturing as it allows for the shaping and forming of steel into various desired forms

and sizes. Rolling is the process to shape the steel into a desired form, such as a sheet, plate, bar, or structural shape, through the application of pressure and heat. The various products that can be produced through rolling include plates, sheets, strips, coils, billets, structures, rails, bars, and rods.

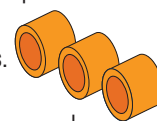


The process of rolling changes the geometric shape of the workpiece while keeping its volume unchanged.

Hot Rolling

Hot rolling is a metalworking process where metal is heated above its recrystallization temperature to plastically deform it in the working or rolling operation.

This process is used to create shapes with desired geometrical dimensions and material properties while maintaining the same volume of metal. The conventional process involves casting of 200-250 mm slabs and reheating and rolling in a hot-strip mill. The final product is a steel slab, which is a semi-finished steel product that is used as a starting material for flat products like hot rolled coils or steel plates.



The slab is in flat form with rectangular shape and thicknesses ranging from 160 mm or more. Additionally, water at high pressure is used to clean the steel during thermal treatment to remove mill scale and prevent surface imperfections on the final product. The steel is then cooled with controlled cooling rate for correct microstructure and crystallization of the steel depending on its intended purpose.

Pickling

Steel pickling is a process used to remove impurities, rust, and scale from the surface of steel.

During hot working processes, an oxide layer develops on the surface of the metal. Before moving on to cold rolling, the metal is 'pickled' to remove this oxide layer and prevent interference with the further processes. The pickling process include these steps:

1. *Mechanical scale breaking, to help cracking the scale on the surface of the steel.*
2. *Chemical pickling, by immersing the hot rolled steel in a hydrochloric acid bath to remove the scale from the strip surface.*
3. *Washing, and rinsing steel to remove any acid residue.*
4. *Drying the steel to remove any remaining water. Applying oil: Apply oil to the surface of the steel to prevent reformation of oxides.*
5. *Passing the steel through squeegee rolls to reduce the reactivity of the surface and slow down the reformation of oxides.*

Cold Rolling

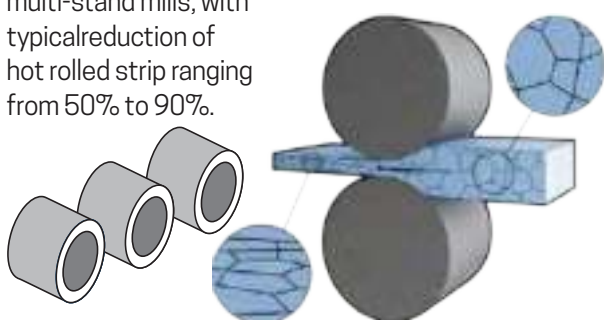
Cold rolling is a process used to change the structure of metals by passing them through rollers at temperatures below their recrystallization point.

This work hardening process increases the yield strength and hardness of the metal, resulting in a stronger and more durable product.

Cold-rolled steel offers several benefits, including increased strength, improved surface finish, and tighter tolerances. The primary purpose of cold rolling is to reduce the thickness of hot rolled steel strips and improve their surface finish and thickness tolerances.

Cold-rolled sheets are metallurgically designed to provide specific attributes such as high formability, deep drawability, high strength, and good paintability.

The process can be carried out using single or multi-stand mills, with typical reduction of hot rolled strip ranging from 50% to 90%.



Types of Rolling Mills

There are four types of rolling mills commonly used in industrial settings:

1. *Four-high / Six-high Rolling Mill*
2. *Cluster Rolling Mill*
3. *Continuous Mill*
4. *Planetary rolling Mill*

Electrolytic Cleaning

Electrolytic Cleaning or ECL is a process used to remove oil, metal, and carbon particles from the surface of cold-rolled steel strips, typically after the cold rolling process. It is done by using a high current density (HCD) in an alkaline solution to clean the surface of the strip before annealing.

The goal of the cleaning process is to reduce the oil content on the surface to less than 20 mg/m² and iron fines to less than 10 mg/m². This is typically done in an Electrolytic Cleaning Line, which is a combination of mechanical and chemical cleaning processes.

Annealing

Annealing is a heat treatment process used to increase ductility and reduce hardness in materials that have undergone cold rolling.

During cold rolling, plastic deformation occurs due to dislocation movement, which hardens the steel and reduces its ductility. To recover ductility, the steel is heated to above its recrystallization temperature and cooled at a specific rate.

This causes the movement of atoms in the crystal lattice, reducing the number of dislocations and changing the ductility and hardness of the material.

The annealing process is important in maintaining workability and preventing brittle failure, it typically occurs in three stages:

Recovery Stage

This stage is where the furnace or other heating device is used to raise the temperature of the material to such a point that the internal stresses are relieved.

Recrystallization Stage

Heating the material above its recrystallization temperature but below its melting point causes new grains to form without any residual stresses.

Grain Growth Stage

Cooling the material at a specific rate causes new grains to develop. After which the material will be more workable. Subsequent operations to alter mechanical properties can be carried out following annealing.

Skin Passing / Tempering

Skin pass rolling, also known as temper rolling, is a process that follows annealing in the production of steel coils. It involves a light cold rolling treatment in a single stand mill, SPM (Skin Pass Mill) to improve the strip shape, remove minor surface blemishes, and impart the desired surface finish to the steel sheet.

The purpose of skin passing is to produce the mechanical properties appropriate to the desired steel quality and end purpose.

A special case of skin pass rolling is represented by the DCR rolling mill, which combines thickness reduction in the first stand with skin passing in the second stand.

Tension Leveling:

Tension leveling is a process used in the steel industry to remove any shape defects (i.e. out of flatness) present in coiled material.

It is generally the final process before the cold rolled product is dispatched to the customer and is therefore a process which plays an important role in delivering the desired material properties and the product standards required by the customer.

Electrostatic Oiling:

Electrostatic oiling is a method of applying anti-corrosion oils to metal sheets and strips using an electrostatic charge. The oil is atomized into small droplets and given an electrostatic charge. The charged oil droplets are then attracted to the surface of the metal, where they evenly coat the surface.

This method allows for precise and even distribution of oil, even at high speeds and with varying strip widths, making it more efficient than traditional manual methods. It is commonly used in strip processing lines for steel production, such as pickling, skin pass, and tensioner leveler lines.

Acid Regeneration Plant (ARP)

Acid regeneration is a process for reclamation of hydrochloric acid (HCl) from metal chloride solutions.

It typically involves thermally decomposing the waste acid in a reactor using direct firing. The reactor can be a spray roaster or fluid bed type.

Rinse water from the pickling line is often used for absorption of the hydrogen chloride, which produces regenerated acid with a concentration of up to 18% HCl.

This process makes acid reusable, reducing the need for new acid, the associated manufacturing costs, as well as the environmental impact.

Steel Coating

Steel Coating is a process used to prevent rust and corrosion caused by humidity and contamination.

There are several methods used to apply coatings to steel surfaces, including:

1. *Hot Dip Galvanizing*
2. *Thermal spraying*
3. *Electroplating*
4. *Sherardizing.*

Galvanization is the process of applying a protective zinc coating to iron or steel, and is commonly done through the hot dip method where steel sections are submerged in a bath of molten zinc. This process provides a durable and long-lasting coating with many benefits such as being easy to clean, hygienic and maintenance-free.

Thermal spraying involves heating a feed stock material and accelerating it to a high velocity, allowing it to strike the substrate surface and freeze onto it.

Electroplating is the method of depositing one metal over another in the presence of a metal salt, and

Sherardizing is a zinc diffusion coating process that uses zinc vapor to form zinc alloys with base material.

Coil coating is another method where a metal coil is coated in a continuous process prior to fabrication, involving cleaning, pre-treatment, and application of paint coatings such as epoxies, polyurethanes, polysiloxanes, and zinc-rich primers.

Different methods of coating include dip coating, brushing, roll coating, spraying, spin coating, and flow coating.



This article is contributed by:
Mr. Irshad Rizvi

With over 50 years of extensive experience in the steel industry, Mr. Irshad Rizvi is a seasoned professional. He has served as Director at Pakistan Steel Karachi and CEO of Pakistan Steel Fabricating Company Limited. In addition, he has also worked as an Engineer in the steel industries of Russia, Ukraine, and Iran, gaining valuable knowledge and expertise in the field.

Currently, he is engaged with International Steels Limited on HR Strip Mill Project.

EXPORT AND INTERNATIONAL TRADE

The Big5 Exhibition

In 2022, the trade show welcomed 2000 exhibitors from 60 countries, 66,494 qualified visitors from 150+ countries, all with a common goal - to build a better tomorrow.



5 - 8 DECEMBER 2022 | DUBAI WORLD TRADE CENTRE



International Steels Limited participated in The Big 5 International Building and Construction show in Dubai, showcasing their products and services to the construction industry. The company highlighted their range of steel products, and exhibited its capabilities in flat steel manufacturing and value-added products. The Big 5 is a well-known event in the construction industry and provides a platform for companies to connect with potential clients and partners, and stay up-to-date on the latest industry trends and developments.

Highlights of the event



EXPORT AND INTERNATIONAL TRADE

Project Qatar

International Steels Limited exhibited at Project Qatar in Doha. Looking forward to meet potential partners from across Qatar and the world beyond.



ISL EXHIBITS AT PROJECT QATAR, DOHA



The member companies of ASC Group, International Steels Limited, International Industries Limited and Pakistan Cables, exhibited at the 18th edition of Project Qatar, an International Construction Technology and Building Materials Exhibition held in Doha, Qatar, from June 06 to 09, 2022.

Project Qatar is a significant event in Qatar's building industry, that brings together industry leaders, suppliers, and buyers to showcase the latest advancements in construction technology and building materials. Project Qatar 2022 is the 18th edition of the International Construction Technology and Building Materials Exhibition.

EXPORT AND INTERNATIONAL TRADE

Listing in TDAP Top 50 Exporters



DOMESTIC EVENT AND EXHIBITIONS

Pakistan Auto Show 2022

International Steels Limited participated at the largest exhibition and gathering of leading automakers, parts manufacturers, suppliers and auto service providers from all over the country.



The Pakistan Auto Show 2022, presented by the Pakistan Association of Automotive Parts & Accessories Manufacturers (PAAPAM), is a premier exhibition of automobiles in the country

It took place on July 29th, 30th, and 31st, 2022 at the Expo Centre Lahore, showcasing the latest and greatest developments and products in automotive technology from over 3000 large, medium and small industries from all across Pakistan.

CUSTOMER ENGAGEMENT

ISL Fabricators' Conference 2023

Strengthening Relationships with Customers and End Users



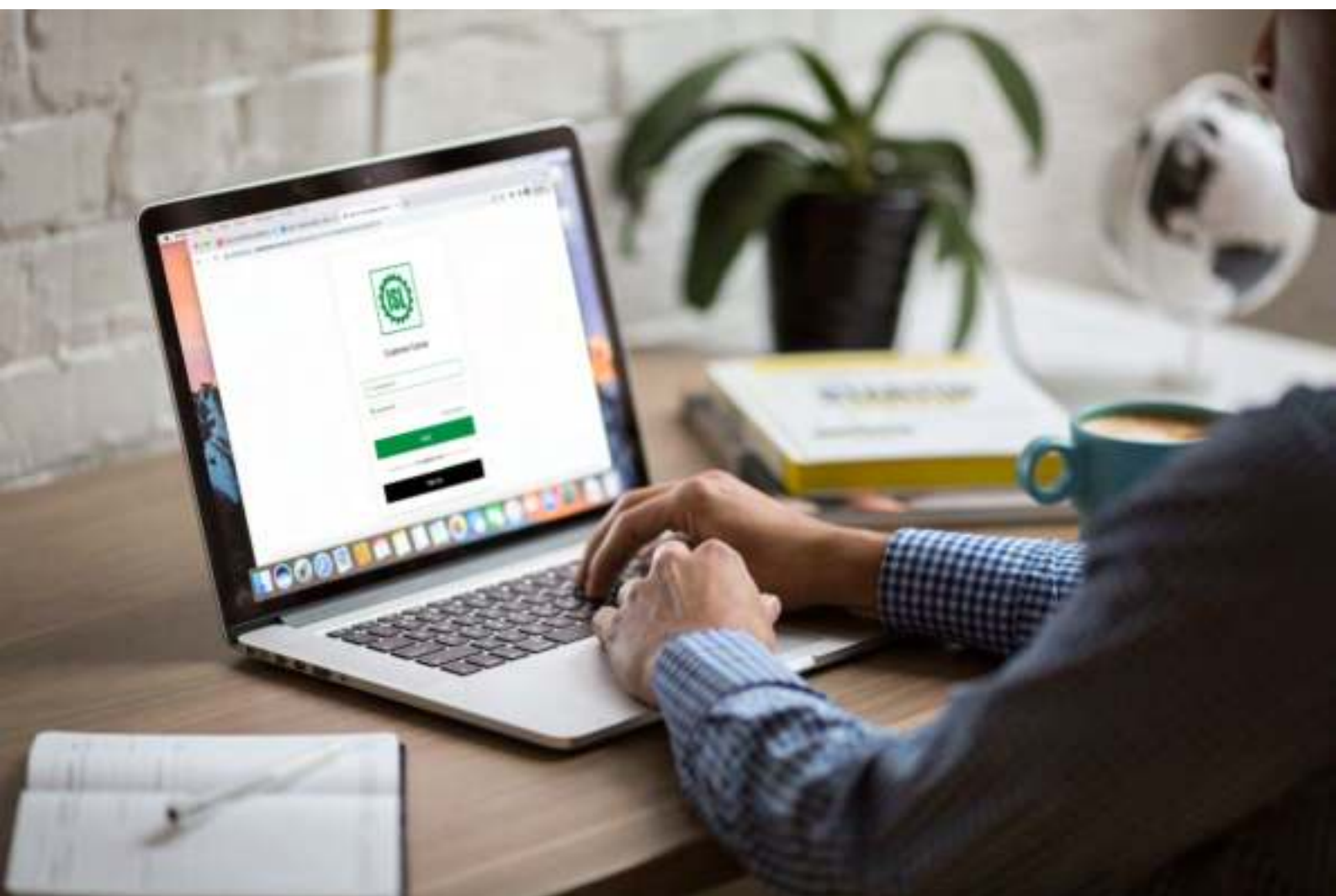
ISL Marketing and South Region Sales Departments collaborated to organize a Corner Meeting and conference with fabricators and customers at the Regent Plaza Hotel in Karachi on January 06, 2023.

The goal of the event was to increase customer awareness of ISL and strengthen relationships with them. The participation and positive response from customers was overwhelming and the ISL team is grateful for their attendance. Some highlights of the event are being shared.

CUSTOMER-FOCUSED INNOVATION

Customer Portal Updates

Convenience and control at the fingertips!



1,000 MT

Orders processed via customer portal from different regions of Pakistan

25+

Customers are using portal to book orders

02

Leading banks providing payment gateways

At ISL, we are dedicated to providing our customers with a seamless experience and value.

ISL Customer Portal is designed to provide customers with a seamless self-service and support experience, allowing customers to easily book orders, view their ledgers, and perform various functions from the comfort of their offices or homes, using their desktop or laptops.

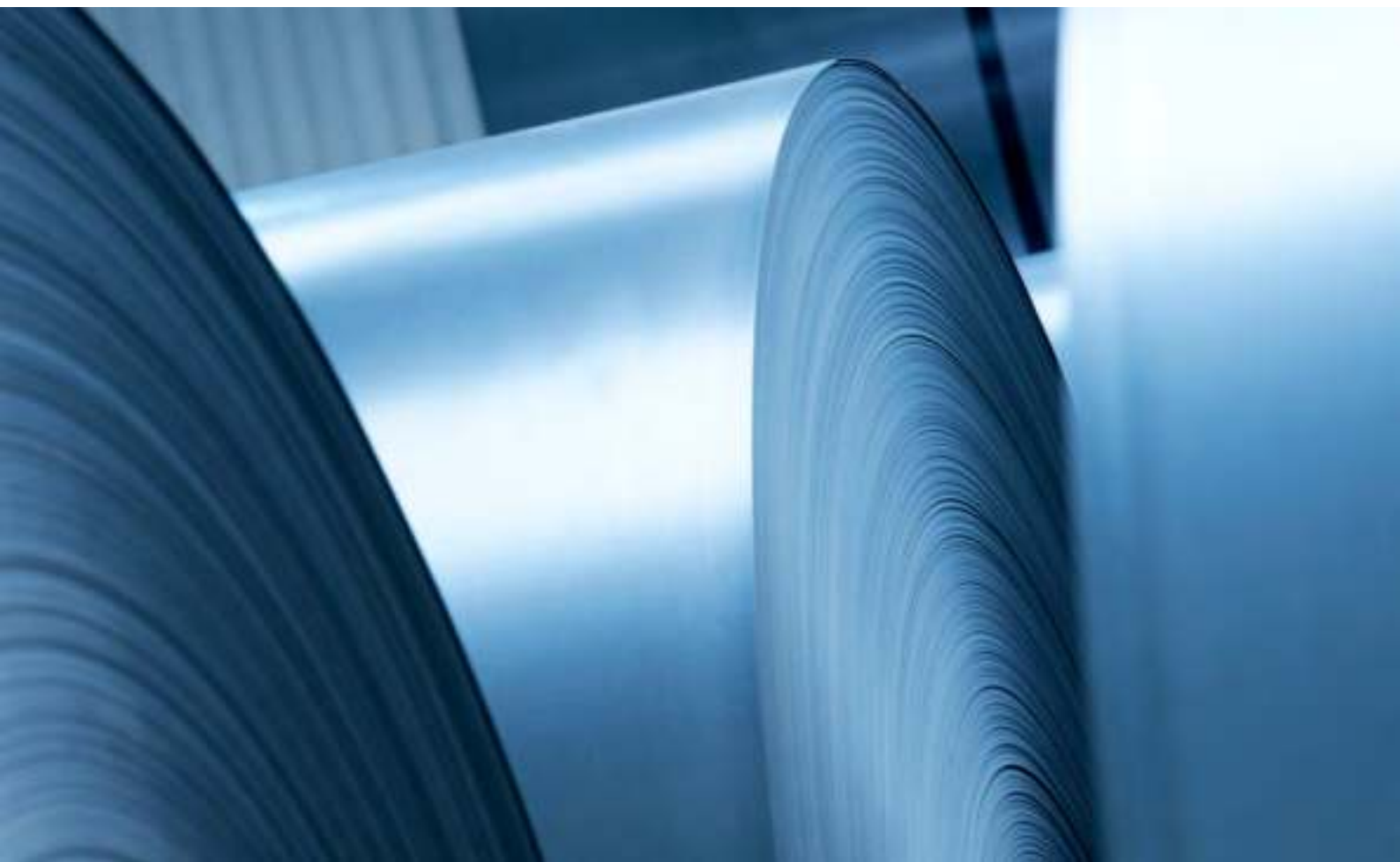
The portal provides a personalized and secure interface, protected by a username and password, customers have a single point and real-time access to products, ledgers, and other transactional information.

Along with the ease of order booking, customers can also check their order history, generate duplicate delivery advice, view balance material, check pickup details, and book orders as needed.

PRODUCT AND QUALITY

Improving Product and Efficiency

Highlights



During the year 2022-23, ISL Manufacturing and Product Teams have developed many new grades, which has enhanced ISL's Portfolio in the Flat Steel industry for these applications:



Automotive Sector



Chain Link



White Goods



Tin Plate Material



Structural Grades (Lower Gauges)

Achieving Manufacturing Excellence: Key Initiatives in 2022-23

- Commissioning of ECL plant to enhance cold-rolled product quality.
- Adoption of Total Productive Maintenance (TPM) for seamless production and reduced downtime.
- Implementation of 6σ methodology to improve business processes.
- Essential measures taken to conserve energy and reduce consumption.
- Recharging groundwater through rainwater harvesting.
- Resource optimization in a challenging business environment.
- In-house repairing of electronic devices like drives and other cards.
- Skin-passing mode implementation on both rolling mills without using external resources.

TEAM BONDING ACTIVITIES

Building Stronger Relationships

Lahore Sales Leads, plans Team-Building Activities and Initiatives for CRC and GP Sales Teams



CRC Central Team Building Activity

Working a 9-to-5 job can sometimes be repetitive, and it's crucial for leaders to keep their team engaged and motivated to reach their goals in a positive environment. To boost up the morale, improve internal communication and productive work environment, Mr. Hassan Arif, Manager ISL Central Sales Team, organized a team-building activity at a local country club where they spent time swimming and enjoying dinner.

This time together was effectively used to listen to the team's concerns and perspectives that may not have been expressed in the daily work routine. This helped him build stronger relationships with team members, leading to a positive impact on the collective business goals.



Uniting Teams through Sport: A Friendly Cricket Match

Catching the cricket fever during T20 World Cup in November 2022, ISL Central Team joined forces to arrange a friendly cricket match, in collaboration with Mr. Hassan Arif (Manager CRC Sales) and Mr. Usman (Manager GP Sales) Manager. The teams came together for a day of friendly competition and team bonding.

This event is just one example of how teamwork and friendly competition can improve relationships and bring teams closer together. Sports have always been a great way to bring people together and this cricket match was no exception. Not only did the teams have fun on the field, but the event also created opportunities for team members to build relationships and strengthen their teamwork skills.

ART AND CULTURE

ISL Art from the Heart 2022

Celebrating the Next Generation of Artists at ISL Factory



The "Art from the Heart" Children's Art Competition 2022 was a collaborative effort by ISL's HR and Marketing Teams. It was open to the children of ISL employees and received over 100 entries in three age categories.

At the event, young artists aged 5 to 13 showcased their imaginative skills and creativity with their artwork on the theme "Shaping Tomorrow". Their works depicted ways to create a better world for the future.

Finalists were selected by a jury of experienced artists and professionals from The Karachi School of Arts based on the creativity and originality of ideas, and the final composition of the artwork.

CSR Activity

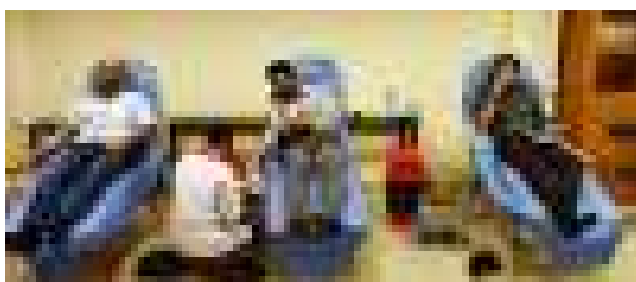
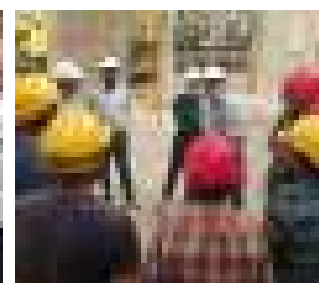
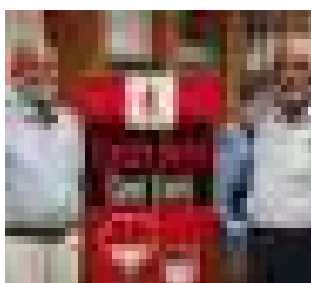
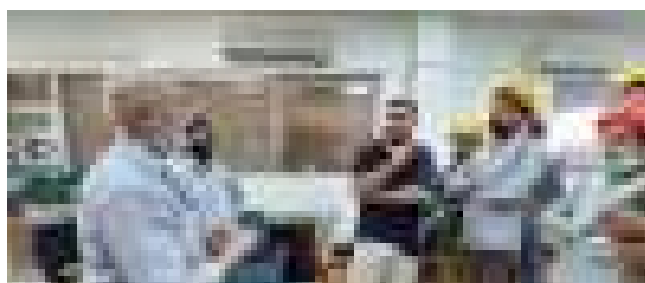
Thalassemia Awareness Session and Blood Drive



ISL's dedication to corporate social responsibility was evident at the recent blood donation camp, held in collaboration with Afzaal Memorial Thalassemia Foundation. On Thursday, September 15th, 2022, ISL team members came together at its manufacturing facility to make a positive impact on the community by donating blood.

Thalassemia is a genetic blood disorder that requires regular blood transfusions to manage. The support of blood donors is critical for individuals living with this condition, making events like this truly meaningful. By participating in this camp, ISL and its employees are helping to ensure that those in need have access to life-saving blood transfusions.

Together, we are supporting an enriching community and fulfilling our CSR commitment.



CORPORATE NEWS

Senate Committee Visits ISL Service Center



The Senate Standing Committee on Industries and Production recently had the opportunity to visit the ISL Service Center in Bin Qasim Industrial Park, Karachi. During the visit, CEO Yousuf Hussain Mirza took the time to share with the senators and visitors the details of the center's operations and the extensive range of products offered.

Mr. Yousuf Hussain Mirza emphasized the company's commitment to exports and their plans for future expansion with a focus on import substitution. This senators and visitors were pleased to hear about the company's efforts to contribute to the growth and development of the country's economy. The visit provided a valuable opportunity for the ISL to showcase its poroduction capabilities and plans for the future.



IT NEWS

Cyber Security Awareness Training

A Session Conducted by Ms. Fariza Shahid - ISL IT Department



Cybersecurity has become a crucial concern for businesses of all sizes and industries. With the advancement of technology, cyber criminals are also becoming smarter, using new techniques to gain access to sensitive information. Data breaches have become common, and it is essential to take necessary precautions to protect company data.

According to various data breach reports, 39% of data breaches occur in the workplace. The root cause of these breaches is human error (25%), process failure (27%) and malicious activity (48%). The most common type of malicious breach is through malware (59%), followed by social engineering (18%) and hacking (23%).

To address these concerns, Ms. Fariza Shahid ISL IT department conducted a security awareness session for ISL employees. The session was held both online and in-person and was attended by employees from all offices, including the head office, Lahore office, Islamabad office, and the service center.

The session was designed to educate employees on various cyber security threats and how to avoid them. The presentation included current examples of cyber attacks and how cyber criminals take advantage of human emotions like trust, fear, and greed. The session also covered phishing emails and how to identify them.

The IT department provided tips on how to improve cyber hygiene at the workplace, including only visiting secure and encrypted websites, not clicking on links from unknown sources, using strong passwords, and not installing software from untrusted sources. Employees were also advised to use multifactor authentication to access their personal and official accounts. After the session, employees had a better understanding of how to treat cyber security threats, such as spam emails, and how to secure their systems with antivirus software.

The session received positive feedback from employees, including appreciation from the CFO, COO, and the CEO of the company. In conclusion, cybersecurity is an essential aspect of today's business, and it is crucial to educate employees on the dangers of cyber threats and how to protect themselves and the company's sensitive information. The security awareness session held by our company was a step in the right direction, and we hope that all employees will continue to follow the best practices to keep their systems and data secure.



Engr. Fariza Shahid is a talented female tech professional who is currently working in the IT Department of International Steels Limited. Over the past two years, Fariza has been instrumental in delivering successful deployments in the domain of IT Security. Her expertise in tailored customizations in specific enterprise environments has been key to her success.

In 2022, she was shortlisted for the "Women in IT Awards Asia 2022" in the "Innovator of the Year" Category by DiversityQ. These awards recognize and celebrate the outstanding contributions of women, allies, and organizations in the technology industry across Asia.

Fariza's achievements demonstrate her commitment to excellence and her passion for the field of IT security and with her potential, she is motivated to make a lasting impact in the industry.

EXPRESSIONS AND IMPRESSIONS

Poetry by Areeba Masood Baig

Puzzle Pieces

We are like puzzle pieces, each with a story untold,
Our edges fit with some, while others leave us cold.
We come together, creating a work of art,
But not all pieces fit, they may tear us apart.

Yet, when we find those who resonate with our soul,
We share a piece of ourselves, making each other whole.
Their essence lingers, even when they depart,
Enriching our being, like a work of art.

But sometimes, these pieces don't fit quite right!
They weigh us down, day and night.
We must have the courage, to release what's not true,
So that the puzzle we are, shines bright and anew.

For in this grand mosaic, we all have a place!
Where our unique gifts and beauty interlace.
So let us cherish the pieces that harmonize within,
And cast aside what doesn't, to live life in grace and win.

Remember the Forgotten

Never look back, they say,
Forget your past,
Forget whatever has hurt you,
Leave them who didn't love you back.
I say, remember them,
Keep them closer,
Closer in your mind.
Look back, sweetheart!
Look back again and again,
Pour the light on your past,
Put yourself in those reflections,
Learn from your wrong-taken steps,
The steps that caused you to mislead.
Then get to the right stairs,
And learn to walk through them.
Keep looking back and keep on trying,
Not to be mistaken the same way as before.
Look back and give a smile to all your regrets,
For you deserve everything but regrets.

About Areeba Masood Baig

Areeba Masood Baig is a creative spirit, an engineer by profession and a poet at heart. Her unique perspective allows her to see the world through a poetic lens and translate her life experiences into thought-provoking verses. She believes that writing is a form of self-expression and healing, a way to communicate with oneself when there is no one else to turn to.

Recently, she co-authored the anthology "Withered Rose," a collection of her work that is available for purchase. As a budding poet, Areeba is constantly exploring new avenues for self-expression and growth.

Follow her on Instagram at [@_poetryaffair](https://www.instagram.com/_poetryaffair) to keep up with her latest creations and musings.

EXPRESSIONS AND IMPRESSIONS

Wall Artworks by Mir Ahsan Ali



About Mir Ahsan Ali

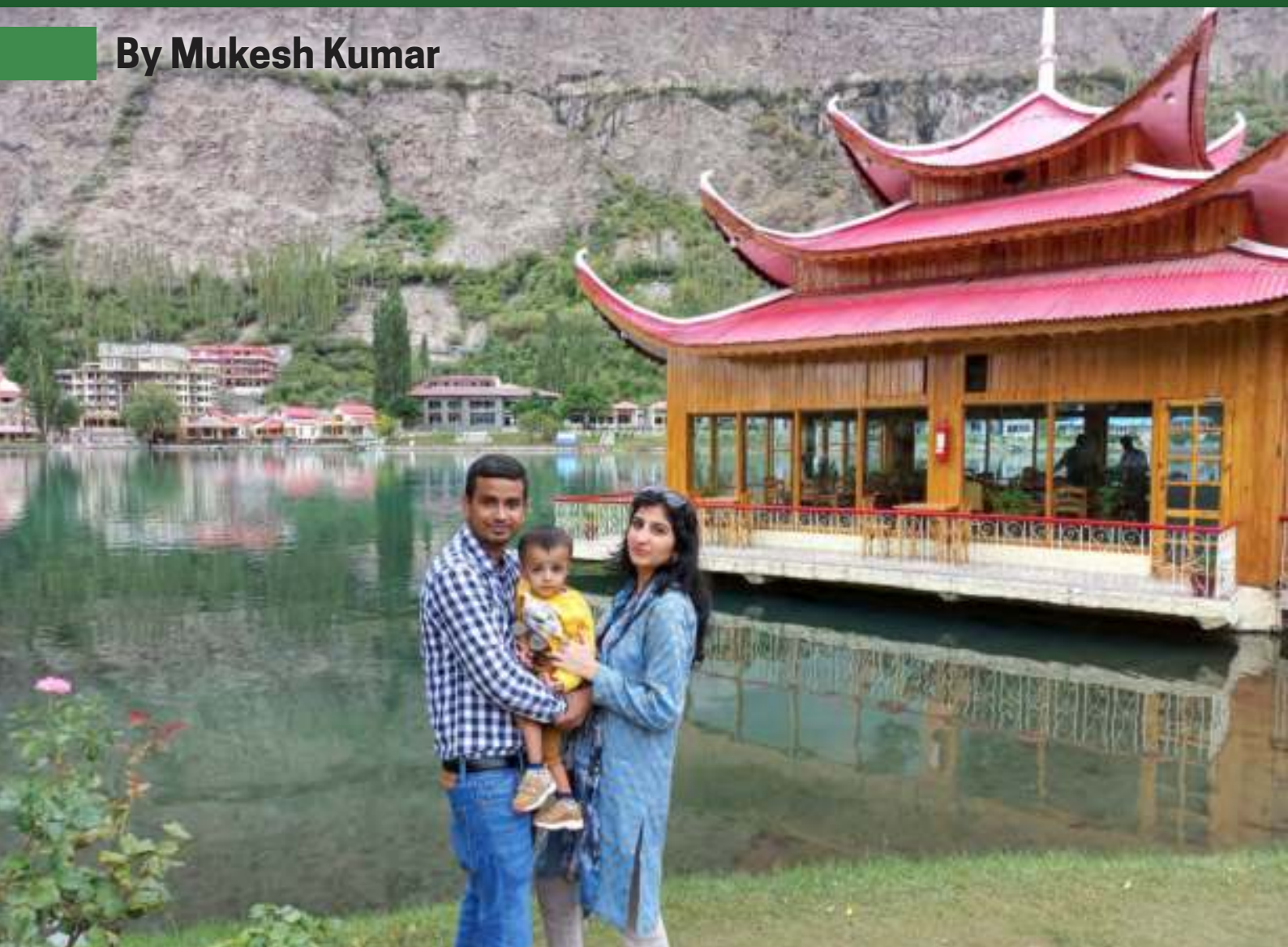
Mir Ahsan Ali is a well-recognized artist at ISL. He was tasked with creating wall art for their production office as part of their branding and 5S program. He was given creative freedom and chose to make a clock featuring the company logo and a painting depicting teamwork. The artwork received praise from the management and became a talking point.

Ahsan continues to showcase his talent as a wall artist and constantly brings something unique to each piece. He serves as an inspiration that art has no boundaries.

TRAVEL DIARIES

Trip to Naran, Hunza and Skardu

By Mukesh Kumar



This year, I decided to embark on a journey to explore the stunning beauty of Nanga Parbat, Skardu, and Hunza. The planning for this trip began a few weeks before departure, and I was eager to experience the breathtaking landscapes and scenic beauty of these regions. From the towering Nanga Parbat to the serene lakes in Skardu and the charming villages of Hunza, this trip promised to be a truly unforgettable experience. Join me on my journey as I discovered the hidden treasures of this breathtaking region.

Day 1: Pickup from Islamabad and Exploring Balakot, Besal and Chillas

The journey began with a pickup from Islamabad and a drive to Balakot, a picturesque town surrounded by lush green hills. From Balakot, headed to Besal and Chillas, two scenic spots known for their stunning views of the surrounding landscape. The day was spent admiring the breathtaking scenery and capturing memories.

Day 2: Nanga Parbat and Arrival at Shangrila Resort in Skardu

The next destination was the Nanga Parbat, one of the tallest peaks in the world, which offered a stunning view of the surrounding landscape. The drive from Nanga Parbat to Skardu was a breathtaking experience, with scenic views of rushing rivers and snow-capped mountains. Upon arrival at the Shangrila Resort in Skardu, the evening was spent relaxing and exploring the local area.

Day 3: Exploring the Shigar Valley and Safaranga Cold Desert

The third day was spent exploring the Shigar Valley and the Safaranga Cold Desert, two unique and stunning destinations in Skardu. The valley offered breathtaking views of the surrounding mountains, while the cold desert provided a unique and barren landscape unlike anything seen before.

Day 4: Sadpara Lake, Deosai Top and Shoesar Lake

The fourth day was spent visiting Sadpara Lake, Deosai Top and Shoesar Lake, three stunning natural wonders in Skardu. The crystal-clear waters of the lakes were a stunning sight, and the view from Deosai Top was simply mesmerizing. The day was spent admiring the breathtaking scenery and capturing memories.

Day 5: Rakaposhi Point, Karimabad Bazar, 3M Junction and Baltit Fort

The fifth day was spent exploring Rakaposhi Point, Karimabad Bazar, 3M Junction, and the Baltit Fort in Hunza. The Rakaposhi Point offered a stunning view of the surrounding landscape, and the Karimabad Bazar was a lively and colorful experience. The 3M Junction and the Baltit Fort provided a glimpse into the region's rich cultural heritage.

Day 6: Khunjab Pass, Attababad Lake, Passu Cones and Hussaini Bridge

The sixth day was spent visiting the Khunjab Pass, Attababad Lake, Passu Cones, and the Hussaini Bridge in Hunza. The Khunjab Pass offered stunning views of the surrounding landscape, while the Attababad Lake was a stunning sight. The Passu Cones and the Hussaini Bridge provided a glimpse into the region's rich cultural heritage. The day was spent admiring the breathtaking scenery and capturing memories.

Day 7: Altit Fort, Chillas, Rakaposhi View Point and Babusar Top

The seventh day was spent visiting the Altit Fort, Chillas, Rakaposhi View Point, and Babusar Top in Naran. The Altit Fort provided a glimpse into the region's rich cultural heritage, while the Rakaposhi View Point offered a stunning view of the surrounding landscape. The Babusar Top was a highlight of the trip, with its breathtaking views of the surrounding mountains. The day was spent admiring the breathtaking scenery and capturing memories.

Day 8: Naran, Saifulmulook Lake, Kiwai Waterfall and Return to Islamabad

We arrived in Naran, which is nestled in the foothills of the Himalayas, surrounded by snow-capped peaks and lush green forests. The next day, we visited the pristine Saifulmulook Lake, known for its crystal-clear waters and folk tales. After which, we headed to the Kiwai Waterfall, a breathtaking waterfall surrounded by lush greenery. The sound of the cascading water and the fresh mountain air provided a much-needed respite from the hustle and bustle of city life. The trip ended with a scenic drive back to Islamabad, filled with memories that I will cherish forever.



NEW INDUCTIONS

Welcome to Team ISL



Schaane Ansari
Divisional Manager
Corporate and Legal Affairs



M. Anas Dawoodi
Senior Manager
Sales and Marketing



Muhamamd Hasan Khan
Engineer
HR Strip Mill



Uzair Ilyas Razzaqui
Deputy Manager
Internal Audit



Hifza Tariq
Assistant Manager
HSE



Usman Ali
Officer
Finance



Haris Ali
Apprentice
SC Slitter 1