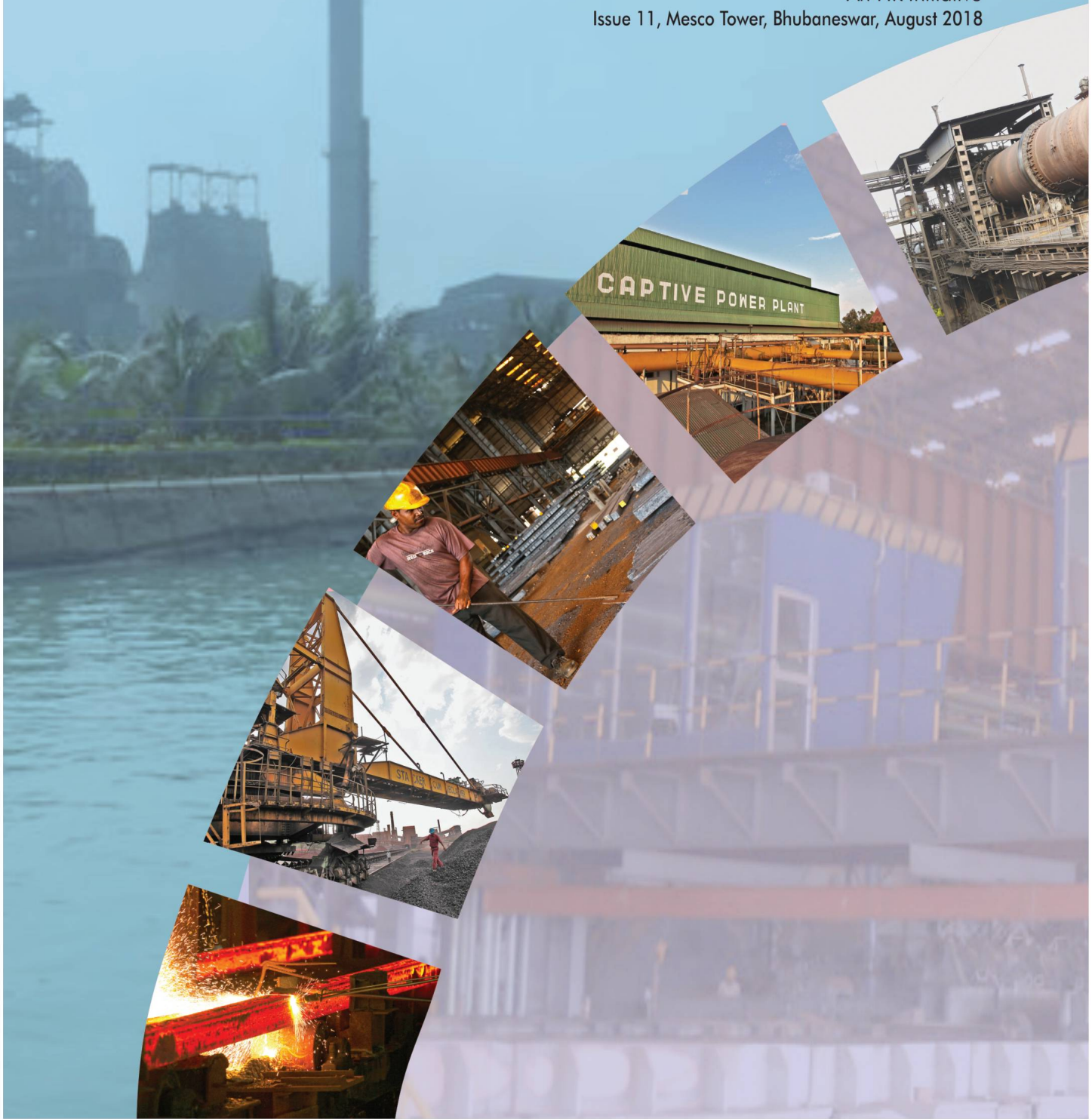




MESCO

Newsline

An HR Initiative
Issue 11, Mesco Tower, Bhubaneswar, August 2018





Mr. J. K. Singh
Group Chairman



Mrs. Rita Singh
CMD

MESCO STEEL Partnering Progress

OUR VISION

“MESCO Group commits to the brick and mortar sectors of economy which promote nation building. Our core competence is therefore in steel, minerals, aerospace, gold mining and low cost housing. In all these sectors we will strive to be the most efficient producer and be among the top companies in the countries we operate in by creating value for the stakeholders. We will constantly strive to pursue opportunities in these sectors and promote establishment of cooperative enterprises for the development of society”

TABLE OF CONTENTS

Page 03	Know Your Plant : Sinter Plant
Page 05	Revamping of 30 MW CPP
Page 06	Welcome to the Future of TMT Bars
Page 07	Union Steel Minister visits to Kalinga Nagar
Page 08	A Commitment to Workers on Revision of their Wages
Page 09	KNMU President felicitated as Best Legislator
Page 11	Recognition to Security Personnel
Page 12	Mesco Steel Product at a Glance
Page 14	Celebration of Independence Day
Page 16	Employee Articles

Editorial...

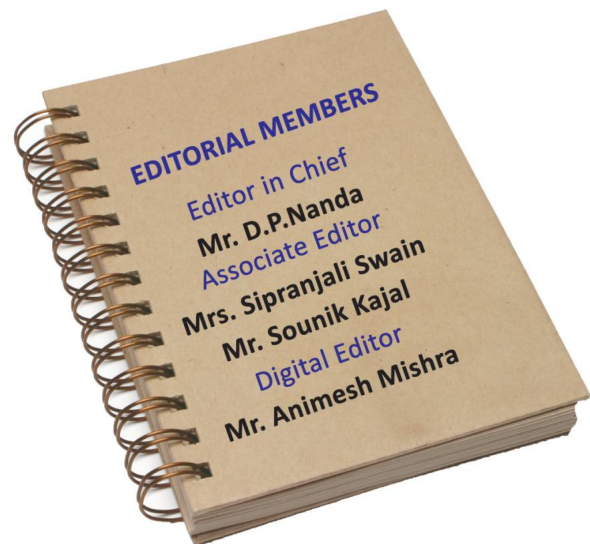


We are overhauled to announce that after successful publication, circulation and wide range of acceptance of Digital Version of MESCO Newsline's 10 th edition, now we brought out the 11th edition to our valued readers with rejuvenate and re-imagined. This time we target to publish the Digital Edition of 11 th Edition in MESCO-II official website by sharing a dedicated space for the Newsline Section.

We hope to use MESCO Newsline partly as an additional tool of input to enrich the valued readers' body of knowledge and their access to further sources of information proving the excellent skills that they bear. Keeping in vision as this edition will be more informative and you will find widespread outlines of various plants and products of MESCO Steel.

The dream of the MESCO Newsline is to become folkloric, stupendous and ubiquitous across the Protagonists, Employees, Families, Purveyors & Clients. Thus we uphold our motto to proliferate knowledge about the Company at its actual. The timeline is a soul witness for the reduction of interregnum of publications.

A huge thank you to all the persons who contributed writing the wonderful and inspiring articles, without which there wouldn't have been this issue. Last but not least, we would like to thank to our Management, Stakeholder and valued Readers for their everlasting support throughout the creation of this edition. We sincerely welcome suggestions from all our valued readers to bring the improvement in the subsequent issues.



Ok R.I.P Gautam Sinha

**2nd March 1973
to
28th May 2018**

It is "shunya" when you lose a friend. When the one more precious than words can describe, is no more with you. Gone with the wind.

When the circle of love of all the souls come together bound by our love for him. Each with countless stories, of moments when he gave our lives color, meaning and bursts of happiness.

When you meet an old soul, the one who made the elephant in the room of disorder of "multiple sclerosis" shrink into a corner so very often... and then came a day he could do it no more.

When what took him away is a bolt out of the blue because he checked out too soon. When it's just time perhaps... but you know there was plenty of fight left in him.

He who was the most handsome ever the one who married his soul mate, who has two beautiful children, who was nick named "Elvis" in college, the one who everyone has a story to share about.

Who spoke of astral planes and made you believe in them. Who had the wit and the sparkle. The wise one. The rake. The rock star. The geek. We want him back.

The buddy with whom friends did wild, wild things and when they met - tallied score and laughed and laughed till tears rolled down your cheeks. Whose songs became the spirit of "Cafe Paris" for us.

Gautam Sinha and Natasha Singh Sinha. They made a good life. Despite everything. She was his star and he the centre of her universe. He took a part of each one of us away with him and has left a part of him in each one of us. And we now need to complete each other by making sure those parts find each other and never break away.



Know Your Plant SINTER PLANT (MESCO STEEL-I)

In continuity to the last news line articles posted about MESCO-I Sinter Plant, Sinter is an agglomeration of iron ore fines and different type of metallurgical waste which is used in blast furnace half cocked raw material

There are basically two types of sinter

1. Flux sinter
2. Super flux sinter

Advantages of super flux sinter

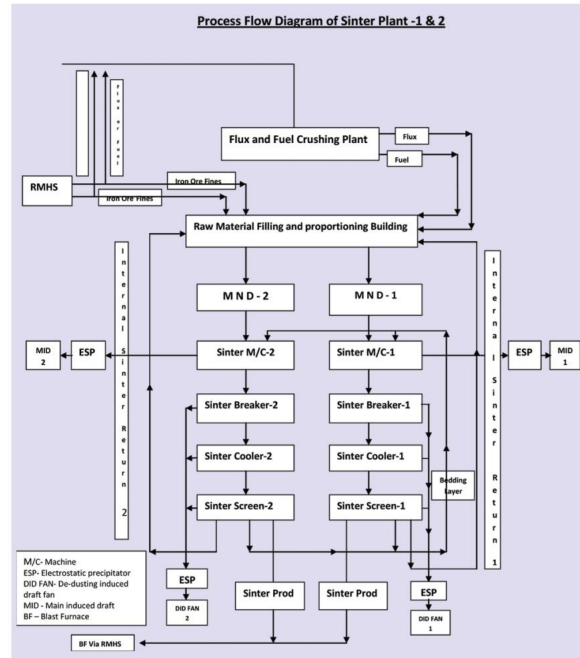
- Gainful utilization of huge quantity of iron ore fines (under size) generated at mines stage.
- Use of super flux sinter in blast furnace burden eliminates charging of raw flux in blast furnace, making more scope for iron bearing material i.e. Sinter/ Lump ore it also helps in substantial reduction in coke rate.
- Other solid metallurgical waste in integrated steel Plants are gainful utilize in sinter making. Solving a measure problem of Solid waste disposal.
- Iron ore fines is easily available at much cheaper rate than lump ore
- As Sinter is pre-flux, reducibility of Sinter is better than lump ore
- As Sinter is stronger and harder than lump ore so crumpling of Sinter inside Blast furnace is less ,also, granular zone inside BF is maintain up to bottom of Furnace hence permeability (Air/Gas flow) inside BF is better
- Sinter size range is narrower so heat distribution inside furnace is better and stable
- AS Sinter is porous than lump so in grace of reducing gas (CO) is better than lump ore, therefore. Reduction process faster and increase the productivity
- As Sinter is made by agglomerating iron ore fine at high temperature many constituent harmful elements like Sculpture present in raw material in sinter bed, so less Sulphur input to blast furnace.
- Material handling in blast furnace is easy and least logistic are needed.

SINTER QUALITY FOR BLAST FURNACES:

TFe – 56-57.5%, FeO – 8-10%, SiO₂ – 4-5.2%, Al₂O₃ – 2-3%, CaO – 8-10%, MgO – 2-2.5%, Basicity – 1.9-2

STANDARD QUALITY OF RAW MATERIALS AND METALLURGICAL WASTES USED IN SINTERING PLANT: -

Specification of good quality raw materials for optimum Productivity and quality of sinter is given below. While procuring raw materials for sintering plant both chemical and physical specifications must be given equal importance.



1) Iron ore fines

Chemical specification	Physical specification
T Fe 63% min.	+10mm 5% max.
Al ₂ O ₃ 2% max.	- 3mm 60 +_2%
SiO ₂ 3% max.	- 0.15mm 15% max.
Ratio Al ₂ O ₃ /SiO ₂ 0.4 to 0.6	MPS 2.5 to 3.25 mm
Moisture 5% max.	

2) Lime Stone

Chemical specification	Physical specification
CaO 50% min.	+40mm 5% max.
Al ₂ O ₃ 1.5% max	-5mm 5% max.
SiO ₂ 2% max.	Size 5—40mm
MgO 2.5%	Moisture 2.5% max
After crushing - 3mm 90% min	

3) Dolomite

Chemical specification	Physical specification
MgO 20% min.	+40 mm 5% max.
CaO 30%	-5 mm 5% max.
Al ₂ O ₃ 1.5% max.	Size 0—40mm
SiO ₂ 2% max	Moisture 2.5% max.
After crushing-3mm 90% min.	

1) Coke Breeze

Chemical Specification	Physical Specification
Fixed Carbon 80% min.	Size 0—10mm
Ash 20% max.(-) 0.5mm	30% max.
Volatile Matter 2% max.	Moisture 10% max.
After crushing -3mm 90% min	
And -0.5mm 30% max	

2) Quick Lime

Chemical Specification	Physical Specification
CaO 90% min	Size 0—3mm
Al ₂ O ₃ 1.5% max	+3% 5% max.
MgO 2.5% max.	L.O.I 5% max
SiO ₂ 2% max.	Bulk Density 1.25—1.47 T/m ³
Reactivity 350min	

3) Mill Scale

Chemical Specification	Physical Specification
TFe 70% min	Size 0—5mm
Al ₂ O ₃ 1.0% max	(+) 5mm 5% max
FeO 50% min.	Oil and grease 2% max.
SiO ₂ 1% max.	more than 2% rejected
CaO 1.5% max.	Moisture 2.5% max.

7) Flue Dust

Physical Specification	Chemical Specification
TFe 30%	0—3mm 100%
SiO ₂ 6%	
C 45%	
MgO 0.8%	LOI 48%
Al ₂ O ₃ 4%	CaO 3.5%

Historical Milestones:

- Achieved production 1206 Ton in day on dated 05/05/2018 (Highest production ever till now)
- Achieved power consumption 38Kwh/TS on date 23/07/2018 (Lowest power consumption till now)



REVAMPING OF 30 MW CAPTIVE POWER PLANT MESCO STEEL - II

The CPP we have is of 30 MW capacity & comprises of 3 Nos of Boilers i.e. 1 X 60 TPH coal & dolo-char fired CVL Make Boiler and 2 X 34 TPH Waste Heat Recovery Boilers with a total installed capacity of 128 MT/Hr steam generation and operating capacity of Max 110 TPH (As both WHRB steam generation is depends upon the 2 Nos DRI plant process operating condition) to generate 30MW power with 1x30MW Siemens make STG set.

The main objective behind the two major initiatives taken this year was to reduce the Steam & Power Cost by utilizing & maximizing char (%) in our AFBC Boiler and to enhance capacity utilization of our Turbo Generator by reducing the vibration level at its low speed end to minimize our energy import bill.





V. N. Tiwari
GM CPP &
Factory Manager
MESCO Steel - II
Jajpur



New PA System

AFBC Boiler Sparger Hopper Bed Modification - (Cost Comparison and Payback Analysis @ 60 TPH Stem Output)

SR NO	KEY PARAMETER	BEFORE	AFTER	REMARKS
01	AFBC Fluidized Bed	Distributor Plate Bed system with Wind Box	Sparger Hopper Bed System	D.B Plate-CVL make Sparger Hopper-Thermax
02	Char Utilization capability on continuous basis	30%	60%	By Weight
03	Average Coal Consumption per day at 100% MCR	270MT-280MT	210MT-220MT	
04	Approx. Coal Saving/day @330 days	Approx. 50 MT/Day		Approx. 50 MT/day @ 1500MT/Month
05	Estimated Annualized Coal Saving @ Rs. 2900/MT			Approx. 4.7 Crore
06	Cost of Project (Thermax & In-house)			Approx. 3.5 Crore
07	PayBack			< 09 Months
	Pictorial View of AFBC Bed system	 		

TG SET MAJOR OVERHAULINGH – (Cost Comparison and Pay back Analysis @ 20 MW GENERATION)

SR NO	KEY PARAMETER	BEFORE	AFTER	REMARKS
01	Specific Steam Consumption	5.0MT/MW	4.10 MT/MW	Include all Auxiliary
02	Low speed side vibration Level at TG Low speed Gear-box End	160 Microns	60-70 Micron	Consumption Replacement of all Bearing, Base Grouting and post alignment
03	Vibration Level at Alternator end	190-200 Microns	125-130 Micron	Replacement of all Bearing, alignment & In-situ Balancing
04	Maximum Loading Limit	22.0 MW	>24 MW	Due to significance reduction on Vibration at Low speed end & Alternator
05	Estimated Annualized Saving @ Rs.3.0/Kwh	Approx.- 4.3 Crore		Considering 300 days of all 03 Boiler Availability & Steam From Process Boiler > 40 MT/Hr
06	Cost of Project (SIEMENS & Inhouse)	Approx.- 2.5 Crore		
07	Pay Back	< 07 Months		



New PA System

The above initiatives were taken by the management are likely to provide immediate boost towards the profitability of the organization.



Electricity is really just organized lightning

Welcome to the Future of TMT Bars

MESCO Steel - II



T. R. Pradhan
GM
HSM & Bar Mill
MESCO Steel - II
Jajpur

The most reliable product of MAITHAN ISPAT LIMITED (A group company of MESCO

Steel) of Modern India through advanced technology, superior quality of raw materials, manufacturer of virgin steel, widely used and thoroughly appreciated TMT bars of the age, known as MESCON TMT.

The brand is well accepted in the country and has

undertaken a series of initiatives to continually develop a range of quality products with utmost customer satisfaction and emphatic endorsements from the Builders, Architects, Engineers, Projects and end users.

High strength reinforcing steel bars, popularly known as Re-bars are produced by using advance technology called Thermo mechanical Treatment (TMT) process. TMT process enhances the durability in corrosion environment. The steel bars are the backbone for construction and are used in combination with cement concrete for Reinforced Cement Concrete (RCC) structures.

The quality of the bars are maintained by alloying with suitable elements such as P, Cr, Cu & Ni etc for use in specific areas like seismic prone zones and corrosion environments. The improved corrosion resistance of Cu-P-Cr-Ni steel has been attributed to the presence of Copper, Phosphorus and small amount of Nickel and Chromium in the dense, adherent rust layer on the surface of reinforcing the steel bar.

MESCON always provides an excellent range of TMT bars with superior quality, dimensional consistency, standard physical & chemical properties as per BIS guidelines. Offering the best in its category product features, all the MESCON TMT bars exhibit superior product with consistent properties like: product with consistent properties like:

- High Strength combined with high Ductility.
- Better Corrosion Resistance.
- Better resistance to high temperature in case of fire hazards.
- Better Fatigue Resistance.
- Better Weldability without loss of strength at welded joints.
- High Tensile to Yield strength ratio.
- Excellent Bendability & Workability.
- Resistance to Ageing.
- Superior Corrosion Resistance.



Union Steel Minister visits to Kalinga Nagar Steel Hub



Union Steel Minister Shri Chaudhary Birender Singh visited Kalinga Nagar Steel Hub on 12th June 2018 to review the progress made by various industries. In his visit Mrs. Rita Singh, CMD, MESCO Steel invited to attend the meeting at Kalinga Nagar. In the meeting, Shri Singh added "Our plan is to enhance the country's steel production to 300 million tons by 2030 as per the national steel policy. As part of the strategy to achieve the goal, we are keen to develop Kalinganagar as a major steel hub. Also he added the steel industry is going to be a major contributor in employment generation in coming days. In these meeting promoters from various industries of Kalinga Nagar Industrial Complex were present. In addition to this Shri Singh said that Kalinga Nagar Industrial Hub had the potential to develop downstream facilities that included ferro alloy plants, duct iron pipe, steel furniture, power component manufacturing as well as stainless steel.

Declare of Pay Revision by MISL Management : Employees with Joyful Hearts are Enthusiastic

Mideast Integrated Steels Ltd is one of the premier steel making plant in the state of Odisha. MISL is the Flagship Company of the Mesco Group and full filled the dream of veteran leader and Ex-Chief Minister of Odisha Late Biju Pattanaik and established the Plant in Kalinganagar in the year 1992. This project is regarded not only a mile stone in Steel Industries of Odisha but also acted as a catalyst to the social and economic development of the locality.

Most of the employees are displaced persons having no knowledge of Steel making at the initial period. It was a great challenge for the Management as well as employees. They were trained

In- house and with the passage of time, they became the most valued Human Recourses of Kalinganagar. A committed work force with determination, MISL has so far sustained all the ups and downs of Steel market from time to time.

MISL has a concern for the displaced families residing in R&R colony and their welfare. Through our CSR initiatives, we are regularly taking care of their health care, education, drinking water and other needs.

Though three registered workers' Unions are operating in MISL but an ideal IR climate is uphold by both management and unions for better production and productivity. Long Term settlements on wages are accorded through bipartite discussion across the table after every three years to maintain Industrial harmony, employee satisfaction and motivation.

After the expiry of the last long term settlement in Dec 2017, all three Unions submitted their respective Charter of demands separately. MISL Management called upon all the three Unions jointly for discussion on their Charter of demands. After a series of discussions/deliberations Management declared a revision of 30% on the gross salary of workers effective from 1st Aug' 2018. As a token of reciprocal gesture and goodwill , all the employees gathered at Plant's canteen on 9th of Aug'2018 greeted and expressed their deep gratitude to Group Chairman Sir' and CMD madam. They have also expressed their commitment to take MISL to new heights.



KNMU President felicitated as Best Legislator Award *“Heartiest Congratulation for Best Legislator”*



The Odisha Legislative Assembly felicitated 24 MLAs with the Best Legislator Award at Bhubaneswar on 24th August 2018. In this context President of Kalinga Nagar Mazdoor Union Er. Priti Ranjan Gharai who is also one of among 24 MLAs was felicitated as best Legislator entitled “Utkalmani Gopabandhu Samman”. The award had not been presented to the legislators for last nine years. Honorable Chief Minister Shri Naveen Patnaik and Honorable Speaker Shri Pradip Amat presented the awards to the best legislators from 2009 to 2016. In this ceremony addressing the gathering, the Chief Minister said, “I am glad that Odisha Legislative Assembly has maintained the high tradition of honouring distinguished legislators for their contribution to enrich our parliamentary democracy.” It is well appreciated that Shri Gharai is a dynamic leader who constantly remind us that anything can be achieved by patience and hard work.

*“On behalf of our MESCO family and the company as a whole,
we wish you unlimited success in future.”*

Road Safety Training Program at Maithan Ispat Limited



Road safety training is a process that aims to provide the drivers and helpers essential knowledge and skills to perform their work in a way that is safe for them and others. To create awareness, a training program on Road Safety was conducted by Mr. Ranjit Kumar Mohanty, Manager-Safety at Plant premises. Around 30 nos drivers and helpers of various Truck, Tripper, Lorry, JCB functioning inside the Plant premises have participated the training session. The concept behind the training program is to create awareness among the drivers and helpers to understand the necessity of road safety and rules and regulation to follow while driving the vehicles. This program is to increase knowledge, awareness and skills amongst the road users which are to change the attitudes and behaviors of drivers by creating people movement for safe behavior.

“Team Building: A Training Program for Individual commitment to Team” *“Talent wins games, but teamwork and intelligence win championships.”*

In a nutshell, the purpose of training program allows the employees to strengthen those skills they need to improve. In this context in-house training session has been organized on 28th August 2018 at New Training Centre, MISL Plant, Jajpur. The session was started with an objective of team building by Mr. D. P. Nanda, GM – Head HR & Admin. and later it was carried by Mr. Sounik Kajal, Dy. Manager-Corporate HR to enlighten the Team Building activities through various theme based game activities. In this Mr. Kajal added, “A key element of any successful team is how well the team collaborates together and how well it collaborates with other teams”. This session aimed at several goals and objectives, the procedures and methodology in which members of the team can discover effective ways to get accomplish tasks by cooperating with other team members. Another goal aimed by team building activities is the development of communication skills, by which team members are expected to learn the importance of communicating ideas and experiences among the group to accomplish goals. Around 20 employees had participated in this training session. At the end of the training session Mr. Digambar Panda, VP-Works and Mr. Sambad Rout, AGM-P&A presented Certificate of Participation to all participants.



Recognition of Commendable Job by Security Personnel at MISL Plant



Security Personnel in MISL Plant, Jajpur have done a commendable job in detecting five trucks on 28.05.2018 having adopted a strange modus-operandi for fabricating a secret chamber for water with a view to pilfer same quantity of Pig Iron by managing Truck tire weight in excess. It is understood that basing on reliable information Mr. Himanshu Mohan Das, Manager- Security had alerted Security Staffs in advance to carry out thorough checking of all the Trucks at gate & weigh bridge. For their above commendable job CMD benevolently declared Cash Reward along with Certificate of Appreciation



to four personnel of Security department namely Mr. H.M.Das, Manager - Security for Rs. 25,000/- and Rs. 10,000/- to each Mr. Dharmendra Bal, ASO, Mr. Harekrushna Rout, Security Guard and Mr. Tanmaya Das, Security Guard, which was presented to the above personnel by Mr. D.P.Nanda, GM-HR & Admin. and Mr. Digambar Panda, VP-Works, MISL Plant on the occasion of Independence Day celebrated at plant.

The reward for work well done is the opportunity to do more

Our Product at a Glance (MESCO STEEL I)

PIG IRON

Pig iron is an intermediary product when iron ore is smelted with a fuel with high carbon, such as coke. This is usually done with limestone to act as the flux. Anthracite as well as charcoal can be utilized as fuel as well.

It has a fairly high carbon content combined with silica and dross constituents, making it very brittle. Pig iron should not be directly utilized as a material with the exception of some limited applications.

Pig iron is produced in the blast furnace sector. The raw materials used include ore, sinter, coke, lime and various aggregates.

To ensure that the production process maintains a high and stable level of quality, these materials have to be metered precisely and supplied to the blast furnace in batches.

PIG IRON	SPECIFICATIONS					PIG IRON	WEIGHT (KG)	DIMENSION (mm)		
	C	Si	Mn	S	P			L	B	H
STEEL	3.8 to 4.2	1.49 (max)	0.20 (max)	0.060 (max)	0.120 (max)	SIZE-1 (PCM-1)	13.47	240	150	100
MISL-1	3.8 to 4.2	1.50 to 1.99	0.30 to 0.50	0.060 (max)	0.120 (max)					
MISL-2	3.8 to 4.2	2.00 to 2.49	0.30 to 0.50	0.060 (max)	0.120 (max)					
MISL-3	3.8 to 4.2	2.50 (min)	0.30 to 0.50	0.060 (max)	0.120 (max)	SIZE-2 (PCM-2)	14.8	245	225	70
BASIC	3.8 to 4.2	>2.50	0.30 to 0.50	>0.060	0.120 (max)					

SINTER

The Concept Of Waste To Wealth

At MISL, Sinter Plant having two number of sinter machines each 36 M2, with different bed height, 450 mm and 500 mm. The designed capacity 993 TPD, achieved 1124 TPD and 1202 TPD from Band-I and Band- II respectively. Sinter Plant playing a vital role in our plant to make Hot metal through Blast furnace. Using the Sinter in Blast furnace reduce coke rate, raw flux consumption and enhance productivity of the furnace...

It is a process of agglomeration at high temperature, by the incipient fusion of Iron fines, coke breeze Lime stone, Dolomite fines and other metallurgical waste under desired vacuum.

Keeping the operation in Mines in past ,when the mechanized mining was started , the fines generation was approx 60%, which was not suitable for Blast furnace to charge directly, but it could not be thrown like a waste and that fines also contains a rich percentage of Iron i.e. 58-65% also became a hindrance for dumping. After lot of research and development the metallurgists finally succeeded to utilize it to extract iron from the fines and sintering process came in existence by Russian and German metallurgists, just before 1st world war. Now it is



widely adopted by all the Iron makers in the world. In case of our Plant, we have so far achieved our hot metal production and coke rate beyond the target in Blast Furnace. It is one of the great causes that we are producing good chemical and Physical quality of Sinter, having More than 55% TFe with 1.9 % basicity and Tumbler Index more than 70, as required by Blast Furnace, which was difficult to produce before restarting the Furnace in Nov'2017.

There was a critical time for MESCO in the period of Oct'2015- Nov '2017 due to global recession in steel market and other reasons too. But we think this is the best time ever for MESCO when we overcome the entire barrier which was affecting to reach our target.

The Team Sinter Plant is very grateful to our management in extending all possible support and providing required technical grade of raw materials, equipment spares and other accessories. I am confident to reach new height in production of sinter with desired quality and do thankful to my all colleagues to provide their endless effort; otherwise it was not possible to meet our target.

Our Product at a Glance (MESCO STEEL II)

MESCON TMT

Size with Sectional Weight Tolerances as per IS 1786

S No.	Nominal Size (mm)	Mass per Meter	Tolerance on Nominal Mass	Tol in Individual Mass of the
1	8	0.395	7%	8%
2	10	0.617	+/-7%	+/-8%
3	12	0.888	+/-5%	+/-6%
4	16	1.580	+/-5%	+/-6%
5	20	2.470	+/-3%	+/-4%
6	25	3.850	+/-3%	+/-4%
7	28	4.830	+/-3%	+/-4%
8	32	6.313	+/-3%	+/-4%

Length: Uniform 12 Mtrs. Can also be supplied in any length on mutual agreement.

Advantages of MESCON TMT Fe 500

Superior Corrosion Resistant.

MESCON TMT Bars show negligible rusting in comparison to Cold Twisted Bars, even after a long period of time due to its special manufacturing process and absence of Cold Stress.

Earthquake Resistant/Seismic Property

With superior seismic properties, MESCON TMT bars ensure better protection and minimum damage to the structure in the event of earthquake.

Excellent Bendability & Workability

The tough outer layer of Martensite and the ductile core of the MESCON TMT bars result in excellent bendability. This Ferrite Pearlite structure allows these bars to be bent with ease.

Superior Rib Pattern

MESCON TMT bars have unique rib patterns resulting in formation of a strong bond with concrete. The uniformity

of the rib pattern ensures uniform strong bonding with concrete for the entire structure.

Fire Resistance Property

MESCON TMT bars when exposed to a temperature of 400°C for one hour, lose only 5% of its tensile strength, which is regained as the temperature comes down.

Higher Fatigue Strength

The fatigue strength of these bars meets the requirements of International Standards.

Resistance to Ageing

The mechanical properties of MESCON TMT bars such as strength and elongation do not show significant change as a function of time.

Weldability

MESCON TMT bars with low carbon content can be used for butt and other weld joints without reduction in strength at the weld joints.

BILLET

Continuous Casting is the process by which molten metal is transformed to a solidified state of semi finished Billet, Bloom, or Slab. Molten Metal from the Electric Arc Furnace / Induction Furnace is tapped into a ladle, and then from bottom of the ladle molten metal is poured into the Tundish of Continuous Casting Machine.

Continuous Casting has evolved from a batch process into a sophisticated continuous process. This transformation has occurred through understanding principles of mechanical design, heat-transfer, steel metallurgical properties and stress-strain relationships, to produce a product with excellent

shape and quality. The process has been optimized through careful integration of electro-mechanical sensors, computer-control, and production planning to provide a highly automated system.

TYPE OF MACHINE	MULTI RADIAL BOW TYPE CASTING MACHINE
RADIUS OF MACHINE	R1: 6 METER, R2: 11 METER
CASTING RANGE	WIDTH: 100 MM TO 200MM,
	HIGHT: 100MM TO 250MM,
	LENGT H: 3 6 METER
CASTING MATERIAL	MILD STEEL, ALLOY STEEL
CASTING SPEED	1 TO 4 MTR/MIN.

72TH INDEPENDENCE DAY-2018 SALUTE THE NATION AT VARIOUS LOCATIONS



Training Program on “Electrical Safety at Workplace”

A Training session has been organized by MISL Plant to ensure about the Electrical Safety at Workplace and the session was taken by Mr. Saroj Kumar Deo, DGM (Electrical) to the employees of MISL Plant on 26th July 2018 at MESCO-I Training Hall inside the premises of MISL Plant, Jajpur. The primary objective of the Training program is to make aware the shop floor employees about workplace hazards and controls so they can work more safely and be more productive while on duty along with it provided employees with a greater understanding of the safety program itself, so that they can contribute to its development and implementation. Around 30 employees had participated in this training session. It was being even observed



that post training activities the awareness towards the Electrical Safety has been more increased as 100% successful training programme.

The Green Journey of MESCO STEEL by Plantation at Kalinga Nagar



In line with its fundamental principle of respecting and safeguarding the environment and in a move to scale-up the environment sustenance effort, MESCO STEEL I and MESCO STEEL II have jointly donated 1000 nos. of fruit bearing and forest variety saplings to Jajpur District Administration for Plantation under Biju Yuva Vahini Scheme and State Youth Welfare Board towards in and around its areas of operation on 27th July 2018. MESCO Steel at its Kalinga Nagar operations has accorded prime importance to environment protection, in line with its Environmental Policy & obeying the regulations released by MoEF. It has adopted best-in-class practices to keep the environment hazard-free towards ambient protection of the environment. MESCO is also leveraging clean and green technology in its production processes to provide a clean, green and safer environment for society at large assuring the least possible wastage disposal to the environment as a Green Friendly Industry.

Blue Brain

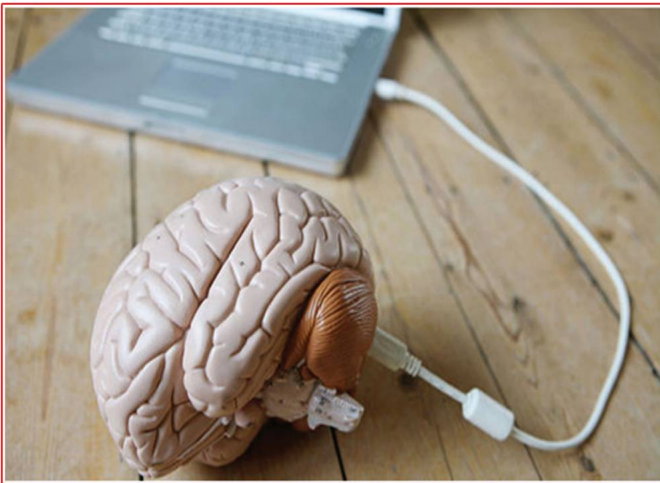
Debasis Panda

Head – IT

Human Brain, The most precious creation by GOD. In intelligent persons, certain brain regions are more strongly involved in the flow of information between brain regions. Without a doubt, the human characteristic that sets us apart the most from the animal kingdom is our extraordinary brain. Damage to the brain caused by an injury or after death of human being. That knowledge might have been used for the development of the human society. It is not possible to copy or transfer someone’s memories to someone.



The name of the world’s first virtual brain is “BLUE BRAIN”. The Blue Brain, a Swiss national brain initiative, aims to create a digital reconstruction of the brain by reverse - engineering mammalian brain circuitry, which can function as a human brain. It will be an artificial brain that can think, response, take decision, and keep anything in memory. Blue Brain Projects Objective is to upload human brain into machine. The computer could then run a simulation model of the brain's information processing, such that it responds in essentially the same way as the original brain. We can archive the knowledge, intelligence, abilities, state of mind and memories of human being and can be used for the development of the human society post death. It is possible to create a human brain because all creations as on followed by the nature and possible due to faster technology growth. . IBM is now in research to create a virtual brain (Blue Brain)



What happen if we create a brain and up load the contents of natural brain into it.

Why we need virtual brain?

- To upload contents of the natural brain into it.
- To keep the intelligence, knowledge and skill of any person forever.
- To remember things without any effort.

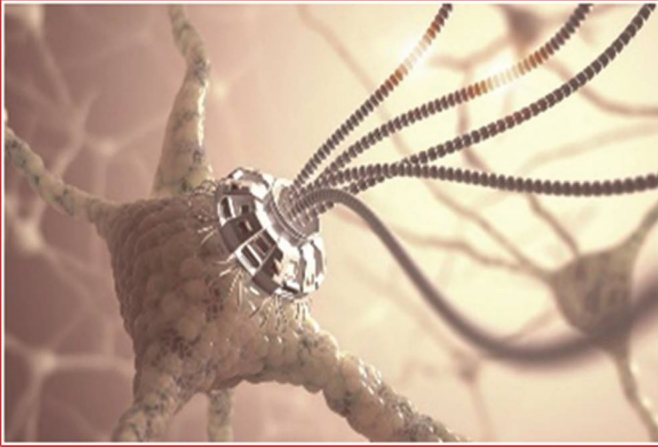
Function

Today’s development is due to our intelligence which is an inborn quality. Unfortunately we lose that level of intelligence along with the body after death. Virtual brain will be solution for recalling all human brain’s database. Technology of Virtual brain function will be similar human’s nervous system. Robot or nanobots are very small to travel throughout the circulatory system. It will monitor the activity and structure of central nervous system, scanning of brain structure, current state of brain during movement into spine and brain. It will also provide complete internal layout of all neuron. All information will be come into into computer system to function as human’s brain to take decision, think, response and keep things in memory.

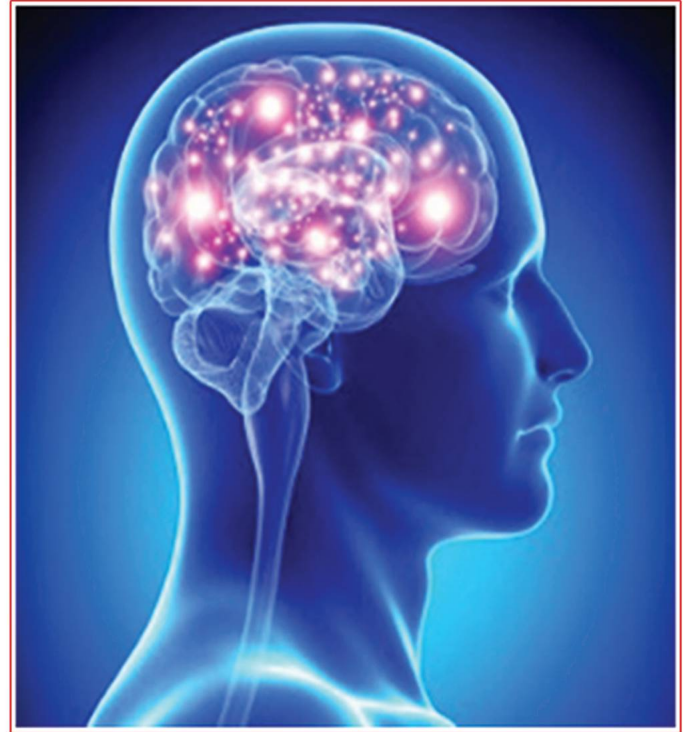
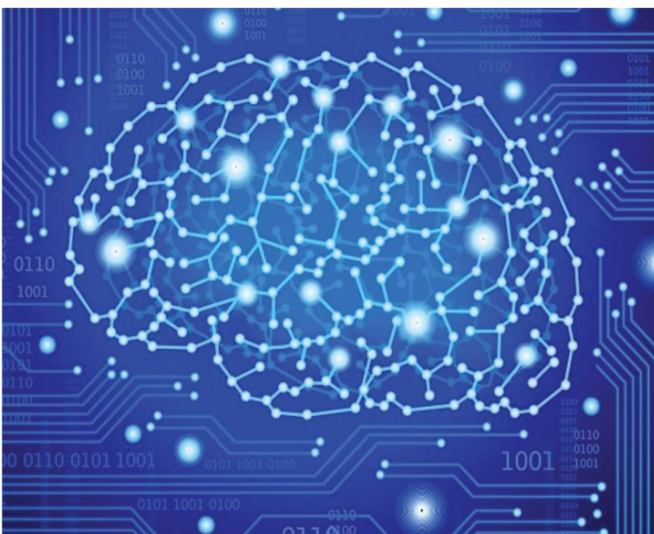
Natural Brain Vs Simulated Brain		
	Natural Brain	Virtual Brain
Input	Through the natural neurons	Through the silicon chip or artificial neurons
	Through the sensory cells	Electric impulses
Interpretation	Accomplished by the means of certain states of many neurons in the brain.	By a set of bits in the set of register
Output	Through the natural neurons	Through the silicon chip
Processing	Past experience stored and the current input	Stored States and received input & by performing some arithmetic and logical calculation
	Through arithmetic and logical calculations	Through arithmetic and logical calculation and artificial intelligence
Memory	Through permanent states of neurons	Through Secondary memory

Uploading human brain

Nanobots (small robot) will upload the human brain into computer system by travelling into the spine and brain. It will monitor all activity and structure of human central nervous system and able to provide an interface with computers as similar in biological form. When all these information entered into the computer system and will be started functioning as us.



Nanobots could also carefully scan the structure of our brain, providing a complete readout of the connections. This information, when entered into a computer, could then continue to function as us. Consequently the data stored in the entire brain will be uploaded into the computer system.



Advantages and Limitations

Advantages:

1. Information can be recollect without any effort.
2. Intelligence, knowledge and skill of any person can be kept & used forever
3. Activities of different animals can be understood easily and can be interpreted with animals using electric impulses from brain
4. It will be helpful to recover many psychological diseases and can get rid from the madness.
5. It will be more helpful for deaf and dumb for interpretation

Disadvantages:

1. We become dependent upon the computers
2. Fear of Human Cloning
3. Very expensive procedure of regaining the memory back.
4. Computer viruses will become headache

The AI & Advanced Project Management

Animesh Mishra

Manager – IT & Digital Marketing
(Webmaster & Digital Editor)

Since the millennium era the Advanced Cyber Technology with Artificial Intelligence penetrated the time. Every moment there are stand ups in the IT world for Human Mind Relaxation from the excessive work. To relax this exhaustion, Human Being is dedicated to create various technologies Out of which Artificial Intelligence is the most Trending & Self Sufficient.

Intro to AI:

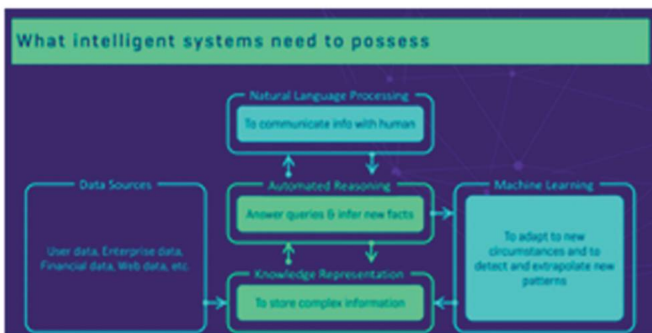
Artificial Intelligence is entirely based upon KBS (Knowledge Base System). A KBS consists of a simple mechanism or KBS can simply be defined as the “Storing your entire knowledge into a storage with automated Reasoning & Logic which is multidimensional validated.



Knowledge Representation + Automated Reasoning = Knowledge Base System

Components of an AI system – Turing Test

In order to pass the Turing Test, the computer would need to possess the following capabilities:



1. natural language processing,
2. knowledge representation,
3. automated reasoning, and
4. machine learning

The KBS helps building an Intelligent System that can respond to the queries.

Usage of AI in various Fields:

Starting from Smart Phones to Advanced Robotics and Software Debugging to Application Software AI is being utilized gradually across.

AI in Project Management:

Project management AI is a system that can perform the day-to-day management and administration of projects without requiring human input. It will not only automate simple tasks but will also develop an understanding of key project performance. Project management AI can then use this understanding to uncover insights, perform more complex tasks, make recommendations, and make decisions; sometimes in ways people just can't do today.

Delivering advice, not just data

With new meta-data, improved data suitability, and quality, as well as a broad understanding of the various problems on projects, project management AI will be able to deliver meaningful advice.

Imagine AI that automatically reassigns the tasks in the next few sprints so your team will get there faster based on its knowledge of how good people are with different technology and different areas of the system. That is meaningful, powerful and useful. And it's not too far-fetched at all. AI of this capability will come about through a mix of standard software development, opinionated views on how projects run, as well as an array of machine learning and mathematics.

The Talent Triangle

Technical Project Management, Business and strategic management skills and leadership are three sides of talent triangle. Artificial intelligent Support and enable the Project Manager to perform their role in each of these buckets, Some areas larger than others.



1. Technical Project Management

Technical project management is the application of the knowledge domains defined in different phases of the project. Artificial intelligent with Project management

assistants, bots and machine learning can play role in providing data driven insights and recommendation to manage the activities. Project manager’s effort towards operational activities would be significantly reduced.

2. Strategic & Business Management

Expertise and knowledge of Project Manager in the domain in which project is executed contributes significantly to Project Manager’s success. Project manager need to align with what are key value levers and how the project will help the organization for a successful business outcome. AI based system will help project manager to model the dependent parameters and predict outcomes of the project.

3. Leadership

These are Skills and behaviours related to leadership which enable the Project manager to manage the stakeholders and take them through the project journey. It is ability to achieve goals, Keep the project team motivated, stakeholder management and make right decisions. This is the area which Project manager can focus while some of the effort of project manager in other areas can be supplemented by AI. Most often this is the area which gets backseat during a project and contribute to project failure. Aligning all stakeholders to a shared goal is the key to Project success.

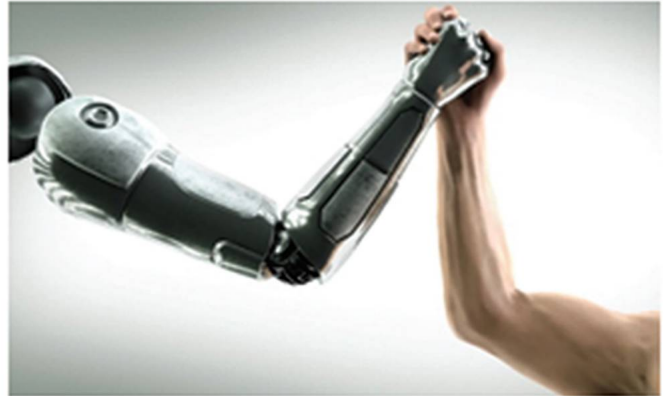
Pros without any Cons

1. Efficient in Quality of Delivery

2. Time Constraint Solver
3. Enhancement in Career Opportunities
4. Advancement in automation
5. Multiple Hierarchy of Workflow Process with seamless presence

Conclusion:

The prime objective of AI in any system is to maintain the spontaneity and creating a robotic automation within the



system that can be self-driven as per directions unlike human resources but most importantly not to eliminate the role of Human Resources instead to enhance the calibre of the Human Resources with boosted skills that can make the system flawless. As Project Management is a part of the Pre-system and just walk hand in hand with the system development and growth so Project Management should be the utmost advanced within the system. The advanced AI enabled Project Management is surely the future for all the industries those who believe in growth and advancement.

Human vs. Machine Project Management		
	Traditional Project Manager	Robot Project Manager
Staff Evaluation	Long project planning cycles involving budgeting and recruiting	Automated skill matching, candidate vetting, and team making
Work Assignment	Planning tools, long team meetings, strategic business alignment, and time-consuming one-on-one meetings	Automated availability detection, tasks assigned as needed
Performance Monitoring	Qualitative and quantitative data for providing 360° feedback	Automated monitoring
Sanction Underperformers	Performance management plans and dismissal	Errors and automated warnings
Worker Grievances, Personal Issues, and Workplace Nuance	Issue identification, work with team member and HR on resolving issues	Errors and automated warnings

Environmental Pollution affects the Human Future



Ranjit Barik
DGM-Finance & Audit
MISL, Bhubaneswar

Nowadays the word Pollution is one of a major vital discussing topic in our day to day human life. Environmental pollution is a broad concept which includes pollution of various biological and physical components of the planet as a result of human activities. Going by this concept, it can be categorized into various types. When we talk about the different types, we usually refer to the pollution of air, water, and land. What we fail to understand, is the fact that this concept also includes noise pollution, thermal pollution, and radiation pollution. We cannot afford to turn a blind eye to this environmental issue any more, as the pollutants are being dumped in the environment at a rate which far exceeds the rate at which it can accommodate them.

The effects of air pollution on humans are quite severe. It is considered the main cause of ever rising cases of respiratory system problems and diseases, like asthma and cancer. As for the effects of water pollution, these include a large number of water-borne diseases, ranging from diarrhea and vomiting to gastroenteritis and typhoid. Water Pollution effects just like the air we breathe, water is vital to our survival. We need clean water to drink, to irrigate our crops and the fish we eat live in the waters. We play in rivers, lakes and streams – we live near bodies of water. It's a precious resource that can easily be polluted and the contamination can be transferred to us and affect our health.

Heavy metals, pesticides, and other such contaminants can also affect our body. They can cause hormonal problems and even damage our nervous system. Pesticides enter our body through the food items that we consume, especially those which are grown in contaminated soil. The health hazards associated with consumption of fruits or vegetables grown in contaminated soil include constant headaches, nausea, and serious damage to the brain, liver, etc. Similarly, the effects of noise pollution include hearing problems, sleep disturbance, mental illnesses, etc. Other than agricultural crops, soil contamination is affecting a number of plant species growing on the planet. The fact that we are dependent on plants and animals for a large number of our daily needs only implies that our existence on the planet is dependent on their existence.

The factors which contribute to environmental pollution exist in plenty. While air pollution is attributed to burning of fossil fuels, water pollution is associated with drainage of waste. Similarly, noise pollution is caused when the level of noise crosses certain decibels, and soil pollution or land pollution is caused as a result of contamination of soil due to the introduction of chemicals in the same. The use of chemical fertilizers and pesticides on agricultural land results in contamination of soil. These chemicals stay in the soil for a long time and eventually come in contact with our body through the food that we consume, which is grown in the polluted soil. While thermal pollution is attributed to its use as coolant by power plants and industries, radiation pollution is attributed to accidents involving radioactive substances as a result of human error. Each of these causes of pollution are attributed to numerous human activities.

Similarly, Air pollution is caused when various harmful gases are released in the atmosphere from industrial plants and automobiles. The concept of water pollution includes the pollution of freshwater sources as well as oceans. On one hand, freshwater sources are being converted to dumping grounds as a

result of industrial water pollution, and on the other, oceans are bearing the brunt of oil spills and marine transportation.

Population growth, rapid industrial and technological development, urbanization and injudicious planning without due regard to sustainable development, there have been induced a variety of changes in the environment. Human activities induce such changes in the environment in the form of pollution that cause widespread damage to the living organisms in the biosphere. The result is the disruption of ecological balance, a growing threat to the entire life support system which is rapidly facing extinction.

There is no doubt about the fact that humans play a major role when it comes to pollution, but it seems like we are not aware of the fact that we ourselves are not safe from the hazardous effects of the same. All the biological and physical components of the planet are related to each other, such that harm to any of these components has the tendency of triggering a domino effect on various other components. The end result is large-scale destruction. The effects of environmental pollutants on humans and other life forms on the planet have already started to surface, and they are only going to worsen with time.

It's high time we acknowledge the fact that we are the ones who are responsible for this mess, and being the most intelligent species, the onus is on us to take the initiative to save our planet. The need of the hour is to get into a damage-control mode to save the environment. That, however, is only possible when we realize that the pollution of various biological and physical components of environment is affecting us and threatening our existence. There are many more environmental factors that can and may negatively affect human health but man has found ingenious ways to avoid most of them. The invention of refrigeration and sterilization techniques, vaccines, etc. have helped us overcome all but the most dangerous.... ourselves.

We live in an ecosystem where the action of one has the potential to affect the many. This can be a good or a bad thing, depending on what the action is. Our mistakes have polluted the environment that we live in and we are waking up and owing to the fact. We are trying to reverse the damage. The good news is that every positive action counts. The small effort you make towards a greener environment can start a healing ripple effect. We may still save what is left of our natural resources and make the world a better place to live in for our future generation. SAVE ENVIRONMENTSAVE LIFE.....

Productivity



Introduction

Productivity improvement is to do the right things better and make it a part of continuous process. Therefore it is important to adopt efficient productivity improvement technique so as to ensure individuals and organization's growth. To achieve this following few points are being described below:-

Productivity is the ratio between output and input. It is the quantitative relationship between what we produce and what we have spent to produce. Productivity is nothing but reduction in wastage of resources like men, material, machine, time, space, capital etc. It is a mentality of progress of the constant improvement of that which exists. It is certainty of being able to do better than yesterday and continuously. It is continual effort to apply new techniques and methods.

Improving productivity means increasing or raising productivity with the help of using same amount of materials, machine time, land, labour or technology.

A firm or department may undertake a number of key steps toward improving productivity.

- Look at the system as a whole in deciding which operations are most critical; it is overall productivity that is important.
- Develop methods for achieving productivity improvement, such as soliciting ideas from workers (perhaps organizing teams of workers, engineers, and managers), studying how other firms have increased productivity, and re-examining the way work is done.
- Establish reasonable goals for improvement.
- Make it clear that management supports and encourages productivity improvement. Consider incentives to reward workers for contributions.
- Don't confuse productivity with efficiency. Efficiency is a narrower concept that pertains to getting the most out of a given set of resources; productivity is a broader concept that pertains to use of overall resources.

Productivity is a key to prosperity:

Rise in productivity results in higher production which has direct impact on standard of living. It reduces cost per unit and enables reduction in sale price. It increases wages for workers and increased profit for organisation. Higher demand creates more employment opportunities.

Higher productivity helps to reduce cost per piece which make product available at cheaper rate. Thus it is beneficial for consumers. Low price increases demand of the product which in turn increases profit of the organisation.

Higher productivity requires elimination of waste in all forms:

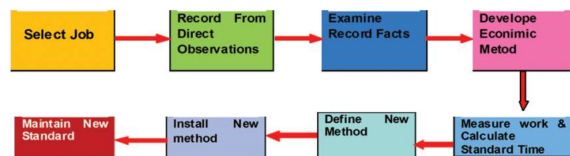
It is necessary to eliminate wastage in raw material, wastage of time in case of men and machinery, wastage of space etc. to improve productivity.

Few Factors for Improving Productivity are :- (a) Capital investment in Technology/ Equipments & Facilities, (b) workforce knowledge and skill resulting from training and experience, (c) Technological Changes, (d) Work Methods, (e) Procedures / Systems, (f) Quality changes in process...etc.

Work study is an important management tool to achieve higher productivity. It is related to human work, method of doing work and standard of performance. Work study is to minimize cost either by designing the work for high productivity or by improving productivity in existing work through improvements in current methods by reducing ineffective and wasted time.

The objectives of the work study are: Analysis of existing method/ finding weakness in existing production process/ Most effective utilization of existing or proposed report and resources/ Setting and measuring performance standard/ Standardize method, material and equipments used in the production process.

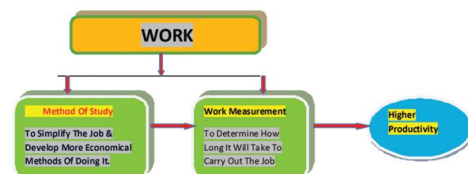
Work Study Procedure



Techniques of Work Study and their relationship with productivity Improvement:

Method study and work measurement are closely linked to each other as both are

associated with work study. Method study reduces the content of job and work measurement investigates and reduces ineffective time associated with job with establishment of standard time. This results into efficient working operations leading to increase in productivity of that process.



A Positive Attitude Affirms Life

Attitude determines the lifestyle of a person and it develops when perception is followed by projection. Positive and negative attitudes are acquired by an individual over a period of the time and according to their development, human beings fall into three categories:

01. There are those who imagine and project difficulties in any undertaking even before they start work and end of doing nothing. They are like the car which will not start unless given a push.
02. They are inspired initially but give up for lack of perseverance the third are those who become more and more inspired to execute a job, the more they face challenge and difficulties. Even if you are successful negativity in attitude can crop at any time for unknown reasons.

Remember:

1. You alone are responsible for your attitude.
2. As is your attitude so being your perceptions.
3. As is your perception, so is your interaction with the world.
4. As is the interaction so being the Experience of life and
5. As is the Experience so being the Quality of life.

People who have negative attitude think and project only negative things and they develop it to such an extent that even a positive thinking person can become a victim of their presence. Such negative people can do nothing and they do not allow anybody else to do anything. Negative Attitude are they result of a weak personality at the physical, Emotional and intellectual level. Physical strength can be gained by proper intake of food, and regular exercise some are obsessed with their figure. They torture their bodies.

They get cranky and miss understand anything their parent say. This is a negative attitude, the person being that when you do not eat properly you think about food. When you do this, the food has gone to your head. Good health helps us to come out of negativity. Emotional stamina too is a must. Emotional strength is a gain by discovering some alter in life-it

could be god, your guru, an idea' surrender yourself at that alter with total involvement and faith. Put logic away because by logic, no problems are solved. By love alone all problems get dissolved. When we apply our faculty of intellect and enquiry in doing a job successfully, it is vital to get things done not because of all odds 'but 'despite all odds'. Enquire into 'how a thing is possible '. One must also remember that life is not about being successful, it is also the ability to go through both success, we enjoy and from failure, we learn. When we have mastered the art of learning from failures, it leads to success ultimately.

This attitude towards failure is a positive one. When these three aspects of your personality are cultivated and develop systematically, you grow and develop Atma bal or inner strength. With inner strength ,positivity becomes the foundation of our expression .the Manduka Upanishad says that the Truth is not revealed to cowards .Success is not for weakling .When you have physical strength ,emotional beauty and intellectual capacity ,your attitude becomes positive. With this positive attitude, you jump into the battle of life, and success is bound to happen.



Kalinga Kumar Dhir
Officer- P&A
Roida-I Iron ore Mines
Barbil



Promotion of Executives at MESCO Group



Mr. S.N.Kambalii
Promoted to CEO, MISL



Mr. S.S.Roy
Promoted to VP-Projects



Mr. D.P.Nanda
Promoted to GM-HR & Admin.



Ms. Sipranjali Swain
Promoted to AGM-HR & Admin.



Mr. Rama Aich
Promoted to AGM-F&A



Mr. Vinesh Agrahari
Promoted to AGM- Geology

Our Best Wishes to following Workmen Retired from MESCO Group on Attaining age of Superannuation



Mr. Lalji Bharti
Shift Incharge- SMS (Process)
Superannuated on 14.06.2018
MESCO STEEL II



Mr. Rama Chandra Mohapatra
Plumber - Utility
Superannuated on 01.05.2018
MESCO STEEL II



Sk. Abdul Rouf
Foreman
Superannuated on 06.05.2018
MESCO STEEL I

LIST OF EMPLOYEES JOINED DURING MAY-AUGUST 2018



Mr. Harsh Gupta
Secretary to Group Chairman
MESCO STEEL I, New Delhi



Mr. Pankaj Mishra
Sr. Manager - Logistics
MESCO STEEL I, Jajpur



Mr. Bikash Jaiswal
Manager-F & A
MESCO STEEL I, Kolkata



Mr. Satyabrata Puhan
Manager-QC (DRI)
MESCO STEEL II, Jajpur



Ms. Anu Aggarwal
Company Secretary cum
Compliance Officer
Mideast India Ltd., New Delhi



Mr. Rajeev Kumar Behera
Asst. Manager-Procurement
MESCO STEEL II, Jajpur



Mr. Subash Chandra Nayak
Shift In-Charge, SMS-Process
MESCO STEEL II, Jajpur



Mr. Laxman Singh
Officer-F&A
Mesco Steels Ltd., New Delhi



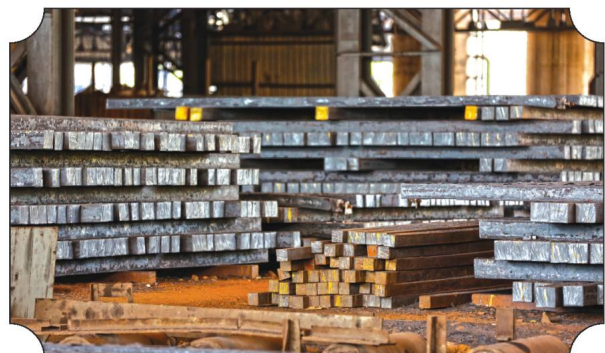
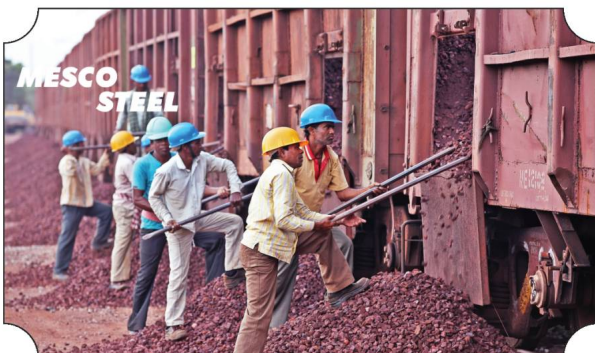
Mr. Subham Bharati
Veterinary Assistant (Para vet)
Krishna Ashram, New Delhi

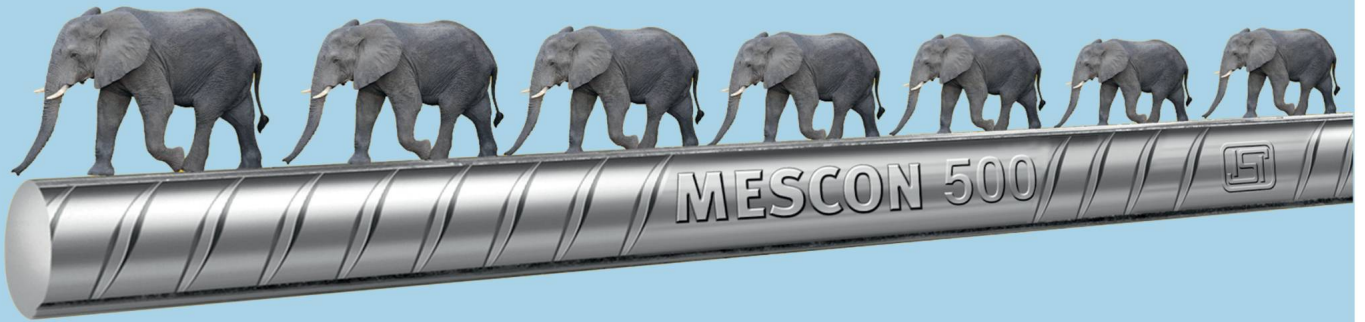
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Mumbai : 401, 4th Floor, Silver Pearl, Opp. China Gate Restaurants, Water Field Road, Bandra (W), Mumbai-440 050, Tel: 022 26413269 / 57, 022 26446173 / 72
Kolkata : Diamond Heritage, 14th Floor, Room No : 1412, 16, Strand Road, Kolkata-700001, Tel No.: 033-66451214/15
Delhi : Mesco Towers, H-1, Zamrudpur Community Center, Kailash Colony, New Delhi 110 048, India, Tel: +91 11 29241099, 40587083, 40587085
Bhopal : House No.- 8-9A, Windsor Exclusive, Phase-II, Chunavhati, Colar Road, Bhopal, Te.-0755-4252705
Chindwara : House No.- 249, Behind Qrt. F/18, Civil Lines, Chindwara- 480001
Katni : Plot No.- 3, Harash Nagar, Collectorate Road, Katni. Tel.- 0762- 2220112
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