



MANUFACTURING PULSE

Brought to you by: CII Naoroji Godrej Centre of Manufacturing Excellence

Academia - Industry Collaboration

MINING the Academia

There is a paucity of young talent in the manufacturing sector, especially in welding industry. Executive Vice President and Member of the Board – Heavy Engineering IC, Larsen & Toubro Limited, Y S Trivedi ruminates on strategies to attract the youth towards the industry.

India's ambitions to become a global manufacturing hub may well be in order, but we have several leagues to go. One task facing the industry is building a skilled workforce. Speaking in this regard, Executive Vice President and Member of the Board – Heavy Engineering IC, Larsen & Toubro Limited, Y S Trivedi says "Youth today are more attracted towards sectors such as finance, banking, IT, etc. However, manufacturing is a vital sector in the growth of any economy." Narrowing down to welding sector, he maintains that it is highly specialised job integrating multiple subjects such as electronics and physics metrology, etc. "Welding is also a crucial part of critical applications such as nuclear energy and aerospace. Yet, very small percentage of youth looks at it as a career choice," reveals Trivedi.

As a possible redressal, he suggests a strong alliance between industry and academia. According to Trivedi, there is a wide gap today between what is being taught and how the industry functions. "Such approach will not produce quality workforce," he stresses.

A lucrative alliance

A sustainable answer to this is better interface between industry and academia. "Industry always has various problems where they need research to be carried out," Trivedi concedes, suggesting that the industry channel some funds towards research work in institutes. On the other hand, students involved in research could benefit from review meetings with industry experts. The process calls for an empowered commission.

"It is win-win situation," Trivedi states, "Industry finds fresh solutions, while students gain confidence from the hands-on experience." Industry-backed funding would also help enhance academic facilities and improve quality of education in the long term.

Recognition for work

Adding another dimension, he mentions that it is not only money but also recognition that drives youth towards other sectors. Citing L&T as an example he says, "Our company has an average employee tenure of 25 years. This is because along with a decent pay package, the company offers recognition of the work done by the employee."

Monotonous jobs are a major factor for attrition. "However, companies like L&T take up projects on 'engineering to order' basis. Therefore, every project is unique, and employees are continually challenged and encouraged to deliver better," he states. This not only helps them learn and grow, but cultivates a sense of ownership towards work.

In all, a correct mix of empowering through education, fair and substantial remuneration, recognition and work satisfaction engage workforce in the company's growth.



Y S Trivedi, Executive Vice President and Member of the Board – Heavy Engineering IC, Larsen & Toubro Limited

DG's Note



MOVING Ahead Safely

Welcome to 2017 and wishing you a very Happy New Year

This year is crucial for the Indian economy as there have been sustained efforts to synchronise government policies, industrial partnerships and deployment of new technologies. CII has been discussing and advocating these issues from all stakeholder perspectives. While industrial growth is important, I believe that industrial safety should be given even more importance – because people come first.

Safety should be viewed as a long-term investment as proper enforcement of safety measures helps to:

- Increase production rate
- Reduce production cost
- Reduce damage to machinery / equipment
- Prevent accidents/fatalities

In December last year, CII had launched the CII-NSC Safety Rating System to encourage companies to focus on safety as a strategy to be pursued for overall business excellence and employee engagement. Safety is of prime importance in the welding industry, which has seen rapid growth. Sectorwise, the Indian welding industry for 2016 was pegged at Rs 4000 crore, of which the welding equipment market size was at 30 percent, while welding consumables made up for the remaining market share. This sector is key for Indian manufacturing and CII is keen to involve all the relevant stakeholders in its growth.

This edition of the Newsletter explores the safety aspect of manufacturing in India, and specifically focusses on the Indian welding sector.

Chandrajit Banerjee
Director General, CII

News

Water management, the Israeli way

CII-Triveni Water Institute, CII's Center of Excellence on Water and the Water Research Center, Tel Aviv University, Israel, entered into Memorandum of Understanding, during the 9th India-Israel Forum in Mumbai. The MoU enhances cooperation of the two countries for improving management of water in India. Prof Klafter, TAU, mentioned that learnings from Israel, customized and applied to water sector in India will further strengthen the bilateral ties between the two countries. Chandrajit Banerjee, Director General, CII, mentioned that combination of Intelligent Policy, Advanced Technology, and Stakeholder Participation will certainly bring about the much desired change in the sector.



Confederation of Indian Industry

Calendar of Management Development Programmes **FEBRUARY – MARCH 2017**

Metal 3D Printing using Cladding
(at New Delhi)
3 February 2017

Programme on GST
11 February 2017

Behavioural Safety
16 - 17 February 2017

Integrated Manufacturing Practices for Enhanced Competitiveness
(at Aurangabad)
7 - 8 March 2017

Foreign Exchange Risk Management
7 March 2017

Tolerance stack-up Analysis Using Monte Carlo Simulation Methodology
8 - 9 March 2017

Gender Diversity
21 March 2017

Round Table

PROTECTING Business and Lives

The CII Conference on Business Case for Safety that concluded on December 21 2016 in Mumbai included a CEO's session on "Safety as a Competitive Differentiator." Highlights of the thought-provoking session follow...

Excellence in Safety leads to improved efficiency and productivity, creating a positive working environment, enhancing business value and a better competitive advantage for the companies."

Chief Operating Officer & Executive Director, The Tata Power Company Ltd, Ashok Sethi stated that "Safety is a Competitive Differentiator without question, as it results in development of competencies and quality of work which in turn converted into numbers."

Think long-term

Managing Director – Regional Operations and Supply Chain (Asia) & Country MD India, Rupark Sarswat seconded Sethi by mentioning that "Business is a subset of Economy and Economy a subset of the Society; not the other way round. There is a direct correlation between production & quality, and Safety, Health & Environment. Safety is the bedrock for existence, and should not be compromised for short term gains."

Putting forward his view on

this Mr Deepak Garg, CEO & Founder, Rivigo, said that "Safety leads to an environment, which is significantly important in bringing the competitive advantage. If long term sustainable inter-generational companies are to be built, they have to follow the genuine path and the cost for following this path may not payoff in the short term but definitely it would do so in the long run."

A wise investment

Dr Suvamoy Roy Choudhury, Director – HR, Vodafone India Ltd, contributed, "It has also been observed that investing in safety does not actually increase budgets. Organisations who have invested in training of their workforce to inculcate safety in their behaviour are found to be more profitable. More and more stress should be put on improving awareness on safety with tier two companies, such as making OSH certification compulsory"

It was also agreed unanimously by all of them that what stops a company from adhering to

safety, is an attitude of putting more value on short term gain. What is not sustainable must end, and it is not sustainable to see people as cost and lives as raw material.

Make it second nature

Safety has to be inculcated in our behaviour and as safety does not come normally to us, rules and regulations have to be put in place and emphasis is to be given to competency building. A lot of work has to be done on safety behaviour of both the leadership and the workforce.

It is also important to find out what, if anything, inhibits the workforce from following safety norms and procedures, and try to solve them. Leadership engaging their time in safety will have a lot of good impact on its workforce.

Lastly all present agreed that everyone should do their bit to help inculcate the culture of safety towards making workplaces safer, thus helping the growth of the organisations and the nation.



From L – R: Mr Deepak Garg, Rivigo, Mr Rupark Sarswat, Croda India, Ms Swati Khandelwal, BTVI (Moderator), Mr Ashok Sethi, Tata Power Company, Mr Suvamoy Roy Choudhary, Vodafone India.

Source: CII

Safety EVANGELISTS

Safety Professionals have been the focal point for companies where operational risks are higher and play an important role in driving Safety agenda in their respective organizations, whether at corporate or at site level. Chief of Group Safety & Health at Tata Business Excellence Group (Tata Sons), Suresh Tanwar summarizes the role, qualities and vision for the safety professional of future.

The “Safety Person”, like HR, represents one of the rare functions that has opportunity to touch top level leaders at one end to workers at the site / shop floors. In the past, “Safety people” were transferred from Operations or Maintenance and had very little domain knowledge of the subject besides their intrinsic knowledge of safety as embedded in the respective workflow/process.

Safety Professionals today on one hand can be seen as adding value to the organization and earning a seat at the top table of decision making (which is very rare). They can as well (which largely happens) be seen as someone to look for when a serious incident occurs, or when there is a citation / penalty from regulatory authorities for a serious non-compliance / violation on safety.

Qualifying for the role

Future Safety Professionals require strong engagement and ability to influence at different levels of the organization, which calls for honing of communication and influencing skills. A part of this is to understand the linkage of safety to business and argue the business case for safety with top management to draw home the point. They have to assure that Safety is part of Organisational Strategy and therefore derived from SWOT (Strength, Weakness, opportunities & Threats) and is also integral part of Enterprise Risk Management Process.

Launch of CII-NSC Rating System for member companies

At the Conference on ‘Business Case for Safety’, the CII-NSC Safety Rating System was launched by CII Past President and Godrej & Boyce Manufacturing Co Ltd Chairman & Managing Director, Jamshyd N Godrej and CII Director General, Chandrajit Banerjee. This initiative in partnership with National Safety Council is a crucial effort by CII in to help member companies evaluate their SHE status.

The Rating is an in-depth assessment of the eight key elements: OH&S Management; Physical Hazard; Chemical Hazard; Fire & Explosion Hazard; Industrial Hygiene / Occupational Health; Accident / incident Reporting; Investigation and Analysis; Emergency Preparedness; and Safety Inspection; comprising of about 70 sub – elements.

Ground realities

In the real work condition, the safety professional must use different levers to draw attention to Safety while interfacing with different segments of stakeholders – a) humanitarian / moral aspect, b) compliance to regulatory requirements and c) business interruption. They need good domain knowledge and should assist the Operational and Project team in Risk Assessment process.

In the course of their work they have to be fearless and hold their ground for the bigger cause of safety in terms of protection of people and property, even at the cost of making people uncomfortable. They also have to be an effective trainer and auditor in Safety.

Contingency action

In case of an incident, the safety professional has to understand and follow the good principles of investigation and effectively contribute before the finalization of Investigation Report. It’s their job to differentiate between Target Zero as Goal and Target Zero as Vision/Aspiration.

They also need to be Just & Fair in their approach in terms of Consequence Management. The actions recommended to management on safety non-compliance should be proportionate to the level of violation to ensure safety is governed better in the organization.

Building a safety culture

Safety today is increasingly treated as a function integrated with the fabric of business, having tangible business impacts. Safety professionals play a staff (rather than line) role and are there to provide support to line managers who must “make safety happen”.

Safety professionals need to wear many different hats: trainer, cop, investigator, and even a bit of a psychoanalyst. But above all, a safety professional is someone whose intervention can save lives. In that this is a noble profession, deserving of the same respect as a doctor or a teacher.

India Inc. rallies for road safety

“It is the responsibility of every stakeholder to bring qualitative transformation if we are to reduce the number of road accidents,” stated Shri Nitin Gadkari, Minister of Road Transport and Highways (MoRTH) while addressing an assembly of corporates during an interactive session on road safety.

Raghupati Singhania, Co-Chairman, CII Public Policy Council, conceded, “It is the duty of every single one of us to work towards improving the conditions of road safety and support the Government in achieving its goal.”

Companies like Hero Motocorp, Mahindra, General Motors, Eicher Motors, and Maruti Suzuki shared their ongoing and future plans for investing in meaningful educational, infrastructural and interventional projects to bolster the cause of road safety.

Kenyan President calls for Indian investment

HE Uhuru Kenyatta, Hon’ble President of Republic of Kenya, at a business meeting organized by CII, FICCI & ASSOCHAM in New Delhi, encouraged Indian companies and investors to work closely with their counterparts in Kenya for successful collaboration and prosperity of the two countries. He added that India and Kenya have growing trade and commercial ties with bilateral trade amounting to \$ 3.15 billion in 2015–2016, but the balance of trade is heavily in India’s favour. Shri Rajyavardhan Singh Rathore, Minister of State for Information and Broadcasting, Government of India remarked that there exists a huge untapped potential for collaboration in the fields of Medicine, Agriculture, Pulses etc.

Source: Tata Business Excellence Group



Suresh Tanwar
Chief - Group Safety & Health
Tata Business Excellence Group
(Tata Sons)

Optimizing SHOPFLOOR MODALITIES

Jindal Stainless is the largest producer of stainless steel of the country and one of the top ten companies in the world. The group has over 62 percent of the domestic market share and also has major presence in international market. Jindal Stainless Hisar, is the mother plant of the OP Jindal Group of companies and has been attaining highest level of operational efficiency in its 45 years of journey. To retain its competitive edge JSHL practices some industry established best practices. An overview by COO, Jindal Stainless (Hisar) Ltd, J J Sood.

Source: Jindal Stainless (Hisar) Ltd



Winners at the CII Quality Circle Competition 2014.

Some practices yield better results than others because of their design and nature. For instance, 5s & TPM and Quality Circles are found more effective and have lead to visible improvement when implemented at shop floor. These methods are inclusive and cultivate a sense of ownership among the employees.

The benefits of adopting best practices are both tangible as well as intangible, in terms of contributing towards employee's growth, job satisfaction and morale, a move to pre-emptive maintenance, improving overall equipment efficiency (OEE), and closer monitoring of the overall manufacturing process.

This is an effective strategy for active involvement of grass root workforce for improvement of routine shop floor problems. The circle consists of 5 – 6 members (work force of different traits within a Work Center), a team leader along with a facilitator. All the members along with team

leader undergo basic training of 7 QC Tools prior to implementation. The 12 step methodology is adopted for Problem Identification, Root Cause Analysis & Possible solutions, Validation, Implementation and Sustenance. The advantages are many, but few of them are mentioned

- Highly motivated as having proud to be a part of improvement team
- Being Empowered to suggest & implement the solutions
- Participation & Felicitations at Regional & National Level Competitions

Continuous Improvement

It is important to deploy all available tools & techniques for continuous improvements in Productivity, Quality, Services along with Cost reduction.

The methodology adopted varies per size of the problem. So if there exists a simple, proven solution to the issue at hand, then Kaizen or Performance Improvement Project could help fix the situation within a time-frame of one to three months. If

however, the problem pervades across multiple departments, it calls for a cross-functional team that can collaborate to adopt the three-month JQI-Juran Trilogy (Design, Control, Improvement) or the Six Sigma - DMAIC Cycle that could take between three to six months.

R&D as Best Practice

Product and processes are always evolving for betterment, as customers are looking for better and new products. However, manufacturing processes are complex and any change in standard operating procedure (SOP) can impact the final product. This is where research and development (R&D) comes in, to work from a thorough understanding of shop floor practices and align the changes through pilot trials. The development of new products and studying the complex problems of manufacturing requires lot of skills and a well defined process.

Learning from the best

Jindal Stainless' position as a pioneer and leader in stainless steel manufacturing in the country has been consolidated over four decades through continuous improvement by adopting global best practices. A key to this is to keep educating employees on benchmark practices and implementing the same at the workplace.

All employees are encouraged to contribute and participate in the continuous improvement process. Junior employees provide inputs on best practices through Quality Circle, suggestion scheme, TPM and other



J J Sood, Chief Operating Officer, Jindal Stainless (Hisar) Ltd, Hisar

Source: Jindal Stainless (Hisar) Ltd

forums.

- a) Joint Practice Sessions
- b) Cross functional teams (CFTs)
- c) Suggestion schemes
- d) Learning platforms
- e) Intercompanies connect

Middle Level employees are responsible for operational efficiency and their participation are in Cross Functional Teams and other developmental projects. They are exposed to best practices of other companies which they ensure horizontal deployment across the company. Senior employees are expected to provide the culture and environment that would foster culture of creativity and innovation and encourage employees to come up with suggestions and best practices. The company follows open door policies which ensure direct connect of leadership team with employees.

Content & Design



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For suggestions, please contact Ms Sandhya Satwadi, Senior Director, CII CME at Sandhya.satwadi@cii.in