

COMMENTARY

Organisational behaviour and management causes for Indian steel players' poor green performance – with specific reference to PSUs

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When the green rating results of steel sector were released recently by CSE, industry was quick to pass the buck on poor quality of Indian raw materials and other obscure and 'uncontrollable' technical factors. But are they the only reasons leading to poor performance? Surely not. As the two-year survey reached final stages, a much deeper and hitherto unexplored reason emerged in the form of misaligned organisational behaviour, culture and functioning. If the steel players want to be smart, efficient and eco friendly producers, they need to shake up their mental framework and DNA first, beginning right at the top. No amount of massive capital investments, regulations and external policing would help this cause.

When the late Prime Minister Jawaharlal Nehru embarked on new publicly owned enterprises such as large steel mills and dams in 1954, he coined them as '*Temples of Modern India*'. Specifically, the mills were conceived as vehicles to bring about socio-economic transformation, adopt modern technology, encourage innovation and show the country the path towards modern industrialisation. Six decades later though the edifice of public sector units (PSUs) keeps crumbling and the recent environmental rating of the steel sector shows that the government's flagship Steel Authority of India Limited (SAIL) too is on a downward spiral.

The rating, undertaken as an independent public audit initiative by Centre for Science and Environment (CSE), a Delhi non-profit, shows appalling levels of pollution in the five integrated SAIL plants². Only one unit, Rourkela came forward for the voluntary disclosure and strict scrutiny exercise, whereas the remaining four - Bhilai, Bokaro, Durgapur and Burnpur doggedly declined providing lame excuses. It was indeed not a surprise that CSE found these non-participating plants to be amongst the polluting of the lot.

While environmental performance does not directly co-relate to profitability in firms, it gives a good idea on corporate governance, cost consciousness, organisational culture and seriousness of the management to walk the talk on high operational efficiency and sustainable development. Alas, the SAIL plants and many other large private steel units were found severely wanting on this front.














So what really ails these public sector elephants and other large and medium steel players in their environmental performance? Are these really only handicapped by technical reasons such as poor raw material quality or are there are other soft issues such as those of management and organisation behaviour that is reflecting in the performance. Here we shall attempt to explore the latter.

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² Please refer CSE website <http://www.cseindia.org/content/india%E2%80%99s-best-iron-and-steel-company-gets-average-score-sector-rated-poor> for brief details of the study.

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Believe it or not, this is the average score of the iron and steel sector in environmental performance. The highest score is a mediocre 40 per cent and the lowest a dismal 2 per cent. Not one but eight companies record rock bottom performance of less than 15 per cent. No one qualifies for the top Five Leaves Award or the next Four Leaves. Of the 21 steel plants rated, three fall under the three-leaves category, scoring just above 35 per cent. Five companies get Two Leaves (25-35 per cent), and another five One Leaf (15-25 per cent)

Plant	Score (%)	Rating
Ispat Industries Limited, Raigad, Maharashtra	40	
Essar Steel Limited, Hazira, Gujarat	39	
Rashtriya Ispat Nigam Limited, Visakhapatnam, Andhra Pradesh	36	
Neelachal Ispat Nigam Limited, Kalinganagar, Odisha	33	
Tata Steel Limited, Jamshedpur, Jharkhand	32	
JSW Steel Limited, Vijayanagar, Bellary, Karnataka	27	
Visa Steel Limited, Kalinganagar, Odisha	26	
Godawari Power and Ispat Limited, Raipur, Chhattisgarh	26	
Jindal Steel and Power Limited, Raigarh, Chhattisgarh	24	
Jai Balaji Industries Limited, Banskopa, Durgapur, West Bengal	23	
SAIL Rourkela, Odisha	21	
Bhushan Power and Steel Limited, Sambalpur, Odisha	20	
Usha Martin Limited, Jamshedpur	15	
Welspun Maxsteel Limited, Raigad, Maharashtra*	9	
SAIL Bhilai, Chhattisgarh*	9	
SAIL Durgapur, West Bengal*	7	
SAIL Bokaro, Jharkhand*	7	
Jayaswal Neco Industries Limited, Raipur, Chhattisgarh*	4	
SAIL IISCO Burnpur, West Bengal*	3	
Monnet Ispat and Energy Limited, Raigarh, Chhattisgarh*	3	
Bhushan Steel Limited, Dhenkanal, Odisha*	2	

* These companies did not participate in the rating. Their performance is based on secondary information and community survey

Final results of the Green Rating Project of Indian Iron and steel Sector, CSE, 2012

Ivory tower culture

The foremost reason identified from the GRP process was the sheer arrogance and the ivory tower culture of the management of these steel plants. Just because they are employed in secure public sector jobs after successfully qualifying in exams once in their lifetime, it does not qualify them to feel privileged and untouched for the rest of their lives. They perceive the rest of the citizens are mere mortals and following the laws of the land as below their dignity. They do not like to acquiesce in front of public regulators or government bodies and definitely not to the suffering community around their plants. In simple words, they all appear like an old *Ivy League boys' club*, placed on an imaginary elite pedestal, most of whom are extremely thick-skinned, cocooned and indifferent to the plight of commoners.

This type of behaviour runs through every management employee in large steel plants. Part of the blame goes to the state/ central governments, bureaucrats and politicians who feed on these corporations for their largesse. The wealth and employment generator tag of these plants implies that none dare challenge them. Surprisingly, it was found from GRP that the SAIL plants do not even listen to their babus of Ministry of Steel, the constitutional body under which it operates. Given this culture for general functioning style, expecting compliance to environmental laws is indeed a very long shot.

When dug deeper, the major reason for breeding of this culture is the infamous '*license raj*' era espoused by the same late prime minister. He believed following a strict Soviet style protectionist governance model, where the government decides on whom to grant permits to start factories (they should be only public sector ones), on how much steel should be produced on a monthly basis, on what should be the price and destination of every tonne of steel produced and how much profits should be earned by each player. So much of centrally controlled working style meant that steel plant management were rewarded even when these companies made heavy losses. While the current *generation-next* has no inkling of that claustrophobic license raj market setting, there is still a deeply entrenched hangover from this era in the current management style of these steel plants. In short, the monopoly culture made them feel they



ILLUSTRATIONS: KARNO GUHATHAKURTA / CSE



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SAIL Bokaro's coke ovens and sinter plant stacks clearly showing non-compliance to air emission norms. What's more, black sooty stack emissions from old coke ovens also mean money going out through the chimney

earned all the money for the nation through levies and taxes. But that has changed. Today, government steel players only account for a quarter of the nation's crude steel production.

A related cause for such complacency is lack of appropriate penalty for management professionals when they commit serious mistakes/ blunders that can damage the environment or safety credentials of the plant. This kind of penalty is usually given when production and cost related functions are affected, but not when the same happens to the allied functions. This is evident in plants like SAIL Bokaro which has high safety and pollution incidences, yet no management personnel is held responsible. Professionals, including production staff, need to be plainly held responsible and penalised for shoddy performance on pollution and safety areas.

Another cause for being indifferent is that steel management are generally housed in luxurious and lush green housing facilities. While the plants continue to pollute and affect the surrounding communities, the management staff and families live in an island of prosperity, wilfully masking themselves from the surrounding messy areas they create. There is no sense of empathy and sensitivity developed in the management staff yet. This could be partly solved if employees and management are made to stay in the surrounding communities for a brief time to realise the impacts of their production and the woes of the people around.

Constant denial mode

The second major reason for poor performance is that the finest of the brains in these steel plants are unfortunately used for hoodwinking external agencies on the actual prevalent scenario in these plants.

While it is glaringly obvious that these plants are non-complying to environmental norms even for a school child, their Environmental Departments and Public Relations team are busy churning reports and environmental statements, months after months and years after years, to show that not only how they are complying, but also create the *'wow factor'* by showing a continuous declining trend in their graphs! Where's their moral compass?

A major reason for public getting carried away with this illusion is the lack of dissent voices from the community, worker level employees, government regulators and media who may sense some problem but do not have a real clear picture. This is because steel making is technically complex. It's not easily understandable to laymen. So, kudos to the highly educated steel management professionals of the country who earn their fat salaries by fabricating data and polishing reports. The so called corporate sustainability documents - prepared by paid consultants and auditors, further polish and shine these reports to proclaim that *'all is well'*.

This cover-up culture was found when GRP team asked steel companies to disclose their compliance performance. It was no surprise that every plant showed figures below the stipulated norms. None had the courage to show that they were having trouble with their compliance levels of air and water pollution.

For a bystander, this eye-washing all appears like those done in physics and chemistry laboratories in colleges where results are made to fit to pre-determined acceptable bandwidths. If the valuable technical education provided by the nation to these professionals is used only for playing real world game of *'smoke and mirrors'* rather than disclose the correct picture boldly, the nation no doubt is the loser in the longer term. This definitely does not bode well for real substantive improvements of the sector and the nation, as the problems themselves are not clearly identified and disclosed in the first place with an open mind and clear heart.

The legal framework for environment protection in industries in fact has its roots in the sustainability of businesses themselves. Even before environmental laws were in force globally, the occupational health and safety concerns led to major legislations being introduced for well-being of workers that eventually aimed at enhancing productivity. Safety and the basic human right to living in pollution free surroundings for the labour families and local community led to subsequent evolution of the environment concept as a common good, leading to introduction of various green laws. Hence, adhering to environmental laws should not be viewed as a 'pain', a 'noose' or a 'cost' by an industry, but as an obligatory path towards continued long term business operations in that particular neighbourhood.

Alternatively, the yearly 'consent to operate' permits could have written public voices attached in the official document while granting the permissions to operate. This may alarm the management about what the locals really think of them.

Improving environmental performance and compliance would also help in improving working conditions and hence productivity. It would also help in attracting and retaining young talent who are more discerning on what eco friendly really means.

Environment departments as Cinderella

Third, the environmental departments in steel plants merely act as clean up organisation for all the mess created by the production and maintenance departments. As per the typical organisational set up, the production divisions are to only focus their attention on production whereas their environmental departments, which are unfortunately designated as a *'support function'*, need to worry about how the



emissions, effluents and wastes from these operations are managed and disposed off. Production staff consider filling up environment and safety related questionnaire or providing any assistance a *pain*.

Many-a-times production departments operate obsolete five-decade old blast furnaces, sinter machines, coke oven batteries or power plants without replacing them with latest efficient counterparts. Leaky pipes, spillages and ad hoc maintenance repairs continue to drain money as well. No monitoring is done on resource consumption such as water by each department. And all these only accentuate in the form of environmental problems.

This type of organisational behaviour comes from the typical Business school mantra, where only short term profits and cutting corners are admired whereas long term and systemic consequences ignored.

Despite the bulk of root causes of environmental problems originating in production departments, it is entirely the headache of environmental department personnel to ensure that there is minimum nuisance created from the plant discharges. In essence, environmental departments in companies operate similar to waste collecting agencies of cities. This type of functioning is called as *end-of-pipe* management where the perpetrator is someone and the suspect held is someone altogether different, or in other words, barking-up the wrong tree! As a result, environmental department personnel are so stressed, helpless and literally cornered, that the easiest way out for them is to fudge data. In fact, the main job of environmental departments has become 'green-washing' to show how good the plant is doing on the environmental front.

Chinese walls – a major problem

This compartmentalisation way of working of separate production and environment functions was very evident in the entire GRP process for all large and small plants. For instance, *Daily Reports* that are used for the crucial morning meetings of a certain production department (sinter, blast furnace) does not have any information printed on that day's environmental performance for that particular unit. In other instance, wastewater treatment of a production process is entrusted entirely to the environment department. And in another case, a continuous monitoring instrument was installed for a chimney of a production process to enable root-cause monitoring and compliance. But *lo and behold*, the production department never even had the data displayed on its control panel. So why bother of stack emissions at all? Rather, the data logged was only used by environment department for mere recording purposes in reams of paper.

All things being constant, if the production personnel are not being made aware of how change in production process parameters affect stack emission levels, or water pollution or solid waste disposal, then it is an utter waste of collective intellectual working. One simply cannot deliver optimum results in such compartmentalised working conditions. It has to be a collective responsibility of the production and environment functions for the non-compliance observed. Seamless coordination is essential between the different departments. Old and obsolete machines have to be closed down. And

environment and safety heads should be a part of all capital investment committees right from the inception stage while obtaining internal project approvals.

The GRP attempted to partly bridge this mental gap. It demonstrated how every decision on the design parameter or operational performance can affect environmental outcomes. If the designers and production personnel have had a bad job in their own days, the environment department cannot be asked to simply clean it up. Retrofits and *ad hoc* measures can only help in suboptimal outcomes which can fail again. So the ball of improving environmental performance falls first on the designers, moves over to the production team and finally to the environment department. If this approach is clearly appreciated by the industry, real substantive improvements could be made.

In fact, organisational behaviour and improving management culture should be viewed as a new dimension and subject of studying how industrial environmental problems can be addressed in the country. Business schools and prophets need to add risk management, factual reporting and disclosure and addressing immediate surrounding local stakeholder concerns as key ingredients for business sustainability.

Ceremonial positions

Fourth, as Environment and Safety responsibilities are tagged as '*support functions*', the departments have also been acting as a host for ceremonial positions during promotions for senior management personnel in steel plants. Middle level and senior staff in Environment Departments are actually found to have a background and experience in some other functional departments and suddenly shifted to environment or safety departments. So when these heads were asked by GRP auditors' team about basic scientific principles of air, water and land pollution monitoring, they were caught unawares. Environment and Safety functions are highly critical jobs. Highly qualified process environmental and safety engineers have to be groomed both technically and managerially along with an army of able subordinates to manage them. Transfers of jobs into and outside should be kept at a minimum to retain and groom the essential skills. Only then environmental and safety problems can be tackled head on, rather than the ad hoc measures followed right now.

Convoluting tendering procedures

The fifth reason for shoddy performance is the labyrinthine tendering procedures of public sector steel plants. The practice of adopting '*Lowest Cost 1*' (or L1) equipment bidder implies that the workmanship is usually compromised by the vendors. Everyone knows well that installing appropriate technologies and adapting to plant conditions requires series of trial and errors and deviations. But no, even for fairly small technology alterations, the public sector companies have to follow elaborate tendering procedures which only hampers quick and tailor-made solutions so as to ensure best possible plant performance. An imaginary '*Damocles sword*' hanging in the form of vigilance officer dissuades the management and engineers from taking quick action. This was found in SAIL Rourkela where doors of coke ovens could not be modified easily for years together, leading to severe energy loss and high pollution. Minimising the bureaucratic complexities and time required of repairs/retrofits/equipment purchase and deviations while maintaining integrity of procurement process, could help in bringing about substantive performance improvements on productivity, housekeeping and overall environment.

Sleeping on the wheel

Sixth, the poor technical skill level of middle and high level managers in steel plants is the major reason for continued underperformance. While mid and junior level managers have basic engineering degrees

(now even those are from *shady* institutions) and undergo elementary technical training in their initial years, the real international class high skill training is never imparted over their entire working careers. This means the technical grooming of future leaders is severely hindered by mundane administrative tasks handled by the managers of critical functions. For instance, during GRP survey, the technical awareness on basic process environmental parameters and safety was found completely lacking in steel plants. In effect, they mid level management were found *sleeping on the wheel*. No wonder then, the western world technicians are still sought out and hosted by these plants to undertake basic technical works. For instance, Russian engineers have to be repeatedly sought out the microbial sludge treatment process of coke ovens in Indian plants. Sometimes, the plants complain it takes years to get foreign designers on work because of the high fees and complex tendering and approval process. All these occur, even while the plant is continuing to pollute the environment.

The lack of deep thinking coupled with poor technical sensitisation and ignorance affects the decision making process in the management's staff entire lifetime. This causes damage not only environment but also the community and the nation. The mid level and senior management therefore need to go back to the text books as often as possible. They even need to have periodic hard hitting independent examinations and assessments to know where they actually stand on their basic and advanced technical knowledge and skills.

Group think mentality

Seventh, the mental framework of steel plant professionals is filled with pre-conceived mindsets. Everyone thinks alike no matter whom you speak to – be it an official in Ministry of Steel, Joint Plant Committee (JPC), management staff in SAIL, Tata Steel, JSW Steel, consultants such as MECON and M.N. Dastur, or an industry veteran. The sector is rife with such like-minded people. One wonders, why can't they think differently? Why have they been conditioned so much with the '*cannot be done*' attitude? Have the old crop of country's bold independent thinkers vanished?

A co-related reason of insufficient mental framework is that professionals lack '*Risk Management*' philosophy. The management often does not challenge themselves on the extreme possibilities. So one could wonder, what's the use of being bright engineers if they cannot forecast potential risks? Surely what happened in Vizag Steel (*19 people died during commissioning of steel melting shop on 13 June 2012*), JSW Steel (*3 people died during routine maintenance repairs in August 2011*) and the infamous BP Deepwater Horizon incident are fresh in everyone's memory on the poor oversight of engineers.

The scale of wilful ignorance on risks can be colossal even in real economic terms. Vizag Steel's June 2012 accident led to deferment of the Rs. 2500 crore initial public offering (IPO), leading the government skipping the divestment milestone while causing immense loss of self confidence to the company top management. The government and investment bankers were simply left dumbfounded at the eleventh hour, even as trade unions upped the ante of poor administration.

This is because nobody wants to be the *devil's advocate*. Why so? The fear of seniors and senior management is high in all Indian industries. Nobody wants to raise critical views, argue and challenge the basic tenets and style of functioning of senior management. The '*colonial mindset*' is all pervasive in these organisations and hence conflicting or grave issues are brushed under the carpet. The management needs to encourage and respect diverging views and give due consideration.

In light of this, organisational structure also needs to be reviewed seriously in the context of who does the Environment (or safety) department head reports to? If he/she reports to a management person overseeing production as well, then the Environment Manager is sure to get short-shrifted. He/she

should rather be reporting to a plant head (CEO) or the board member directly and raise issues without fear.

Chief Risk Officer needed

In line with the recently released Harvard Business Review paper in June 2012 by Robert Kaplan and Annette Mikes on '*Managing Risks – A new framework*'³, Indian steel companies need to nurture a healthy culture of encouraging and communicating conflicting views and debating on them. Where's the fun of leading a bland work life where you do your 9-5 job without challenging the mindsets and have a *blue sky* policy? The tail risk scenarios need to be forecasted and acted upon. The company officials need to come out of the shell or group think mentality as quickly as possible. But for now, everything seems to be going on well at least on paper, till the disaster strikes one day.

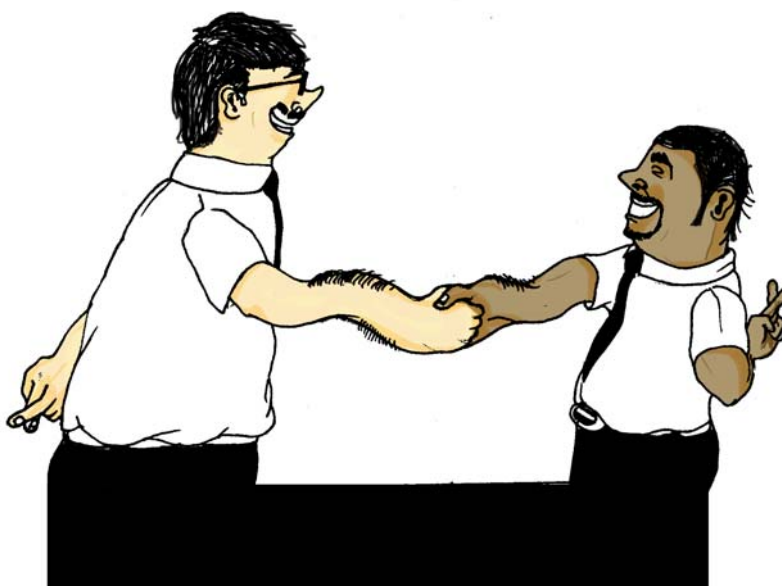
Given the findings of GRP on Environment and Safety, it is deemed appropriate the steel companies should have Chief Risk Officer (CRO), similar to the lines of Financial and Operational heads, who will play the role of devil's advocate to the CEO, MD or the Board Members.

Currently, environmental and safety risks are usually compartmentalised, labelled (as not important), and never escalated or communicated clearly. Every wrong doing is kept under wraps so as to be seen as complying. But this fear of prosecution doesn't help the regulators and public to understand and develop a consensus to tackle the underlying problems.

So, there has to be a new mechanism where risk identification, disclosure and communication are suitably rewarded internally within organisations. As environment is a public good, incentive mechanism need to be put in place by governments where voluntary disclosure of non compliance is suitably appreciated. Salaries and incentives need to be modified for rewarding risk management. Let the companies themselves come forward and state that it is unable to comply with the chemical oxygen demand (COD) levels in its coke oven waste water, particulate matter (PM) in its sinter plant stack or that it is constrained to dispose so much solid waste outside premises. In short, the incentive mechanism perhaps needs to change with rewards for accurate disclosure, consensus building and problem solving.

Patting themselves on their backs

Lastly, the poor performance of the sector can be attributed to self aggrandising by numerous dubious awards being given by industry associations (of which the industries themselves are members), consultants (who eventually bag projects from the recipient companies), standalone award-giving foundations (who run award giving as a business by itself), association of board of directors (such as SCOPE), run-of-the-mill organisations, etc. This leads to false self belief that everything is going on well, even when it actually isn't. Paid consultants are unable to convey



³ Kaplan R. and Mikes A. , (2012) 'Managing Risks: A New Framework' Harvard Business Review 90, No.6, June, <http://hbr.org/2012/06/managing-risks-a-new-framework/ar/1>

shortcomings on the face. Critical assessment by independent government and third-party bodies with specialised technical skills are also lacking. Even the Comptroller Auditor General (CAG) of India (who believe they have the required environmental assessment skills), had given a satisfactory clean chit to the environmental performance of SAIL plants.

If this is the organisational culture scenario prevalent, one begs to question, how will the companies and hence the nation eventually improve on environmental front? Why don't steel plant professionals own up to the shortcomings they face? Are poor raw material quality and technical factors the only reason for poor performance? How can management change its style of functioning to bring about change? The steel sector needs to answer a lot of serious questions to the country.