

Case Study.

Aditya Birla Chemicals.

dss+ Provides Operational Risk Management and Safety Solutions to Aditya Birla Chemicals

dss+ collaborates with Aditya Birla Chemicals to help lower injury rates, raise productivity, enhance operational efficiencies, outpace benchmarks, and establish a world-class safety culture.

Challenge

The Indian chemical industry has grown 13-14% annually in the last 5 years (2007-2012). The encouraging growth of chemical industry also brings concerning hazardous incidents and worker safety into sharp focus. Lack of safety measures along with a limited knowledge of potential hazards of chemicals often leads to several dangerous incidents and fatalities in the industry. Aditya Birla Chemicals has tremendous focus on providing a safe working environment to its workforce and consistent focus on reducing the number of accidents, injuries and illnesses. However, manufacturing operations, material handling and logistics posed numerous safety challenges to the company in improving safety and taking it to a world-class level. For example, the company's rayon unit at Veraval, Gujarat, was facing constant challenge of recurrent bursting of spinning pots for which no readymade solution was available in the market. Similarly, worker safety at Rehla site in Jharkhand was another area of concern primarily because of traditional operating methods and poor awareness about safety risks among local contractor workers. With a belief in "Good Safety=Good Business", the leadership decided to make a step change in its safety performance across all operations including design, manufacturing operations and distribution. Leadership at the group asked dss+ to assist the organization in moving towards world-class safety performance and making safety a part of integrated operations. Four Indian sites of the business started their journey of safety excellence with dss+ in



the beginning of 2012. The journey started with Work Place Safety (WPS), wherein at-risk behaviours were addressed. This was further extended to include Process Safety Management (PSM).

"Safety is more than just a matter of compliance. We want it to be sustainably and intrinsically driven, as a part of our normal day-to-day operations"

- Mr. Lalit Naik, Business Head – Aditya Birla Chemicals & MD ABNL

Solution

The journey towards 'Shunya' With the initial assessment completed, dss+ and Aditya Birla Chemicals decided the primary goals of the engagement, which were:

- Reduce injuries and incidents and ultimately bring injuries to 'Shunya'
- Involve and engage senior leadership to drive safety culture and make it a proactive commitment
- Ensure that safety is integrated into line management responsibilities
- Define metrics and establish an annual progress review of safety cultural transformation in the company



dss+ Safety Management Elements

MANAGEMENT COMMITMENT

CULTURAL

- Line management accountability & responsibility
- Goals, objectives & plans
- Safety Personnel
- Procedures & Performance Standards
- Effective Communication
- Training & Development
- Motivation & awareness
- Observation & audits
- Incident Investigation
- Management commitment
- Policies and principles
- Integrated organization structure

MANAGEMENT COMMITMENT

RISK-BASED

- Quality assurance
 - Pre-startup-up safety reviews
 - Mechanical integrity
 - Management of change - facilities
 - Process safety Information
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- Management of change-technology
 - Risk assesment & process hazzards analysis
 - Process safety information
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- Emergency preparedness & contingency planning
 - Management of change - personnel
 - Contractor safety management

FACILITIES

TECHNOLOGY

PERSONNEL

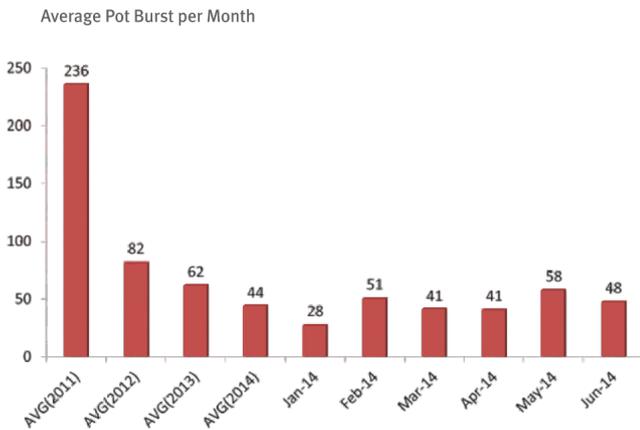
Developing a roadmap for world-class safety Aditya Birla Chemicals, with support from dss+, developed and implemented a safety management system, focused around operations environment. This included:

- Setting up of corporate objectives: Aditya Birla Chemicals Business leadership team finalized a set of seven safety principles as foundation stone for all their activities. Annual improvement goals were identified and tracked at corporate level by a steering committee.
- Sub-Committees with leadership commitment: The company formed six sub-committees to cover Safety Rules & Procedures, Safety Observation & Audit, Incident Investigation, Capability Development and Communication, Safety in Transportation and Distribution, and Contractor Safety Management. Each sub-committee was led by a senior management team.
- Identification of high-risk areas: The Work Place Safety (WPS) engagement framed ten high risk focus areas, which included personal protection, working at height, materials handling, job safety analysis, work permit, lock out tag out, hot work, scaffolding, incident investigation

and excavation. The management reinforced these standards and expectations through consistent auditing and observation.

- Process Safety Management implementation: As a part of Process Safety Management (PSM), the manufacturing process is routed through a 14-element wheel to address risks qualitatively and quantitatively. In addition, the company drives control mechanisms to mitigate safety issues.
- Measurement procedures: The team developed systematic procedures and measurement metrics including safety perception survey, data analysis, and field visits to assess current state.

With this comprehensive strategic process, Aditya Birla Chemicals has been successful in involving all work force including HR and support functions in safety activities- both on the job and off the job. Moreover, by addressing operational and behavioral aspects of safety, the Chemicals Business was able to reduce injury rates by nearly 40 percent at the four sites between 2012 and 2013.



also worked with the team to devise engineering solutions by developing a new spinning pot made from dss+ polymer. By introducing engineering solutions and changing behavioral aspects through right trainings, Aditya Birla Chemicals Business has been able to reduce injuries at the Veraval site, leading to safer working conditions and improved productivity



- Improved working conditions for workers – There is a visible change at the salt unloading area in the working style and people's attitude towards safety at the Rehla site. Workers are more cognizant of safety risks and demonstrate safe behavior, which includes wearing proper coveralls while at work. Contractors openly talk about their safety concerns with senior managers at morning tool box talk at Nagda site. The company believes a safer and improved working environment has resulted in greater retention of employees. The management believes that this trend will encourage prospective employees to consider jobs at the company.

Continuing the journey towards 'Shunya'

Continuing the journey towards 'Shunya' incidents, Aditya Birla Chemicals management is working actively with dss+ to improve process safety. Given the inherent hazards of the chemicals handled and manufactured, the company is identifying process hazards and enhancing controls as the first step.

Further, there is a process of developing internal capability and competency to enhance skills associated with process hazards analysis, management of change and risk awareness thereby contributing to risk reduction.

The Aditya Birla Chemicals Business product line includes hazardous chemicals that have to be transported on some of the most dangerous roads in India. The business has collaborated with dss+ to work extensively with the Safety in Transportation and Distribution Sub-committee (ST&DSC) to raise the bar for safety measures during transit and material handling. In 2014, the dss+ team participated in a 'Distribution Safety Workshop' at Bharuch, where all unit representatives brainstormed on developing a standard guideline for safety in the area of transportation and distribution. Consultants from dss+ took the company representatives through best practices from across the globe and urged transporters to cooperate to help achieve a higher level of compliance.

"Integration of safety is paramount in our business approaches. We firmly believe that employee involvement holds the key to establish a safe work place. Hence it is important that we ensure every employee contributes to make this a sustainable cultural change"

**- Mr. K. C. Jhanwar, Managing Director, ABCIL & SBU
Head-Chlor Alkali, India**

"In our journey of three years with dss+, we have reached a stage where safety is imbibed in the DNA of the entire team. We have put the process in place to ensure continuity of use of safe work practices in a sustainable manner"

Mr. Lalit Naik, Business Head – Aditya Birla Chemicals & MD ABNL



About Aditya Birla Chemicals

Aditya Birla Chemicals is a leading manufacturer of bulk and specialty chemicals and viscose filament yarn. The business is spread across multiple manufacturing locations in four countries – India, Thailand, Germany and China. The business is creating a strong footprint in the chemicals industry – it is a market leader in the chlor-alkali segment in India; at number two position in viscose filament yarn and is the third largest manufacturer in the world in sulphites. The Chemicals business has 14 manufacturing sites – seven in India, five in Thailand, one in Germany and one in China.



dss+

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