

UNIDO - ACMA

Partnership Programme, India

Case Study #4:

Sandhar Automotives, Dhumaspur



Case Study #4:

Sandhar Automotives, Dhumaspur



"UNIDO has taught us how to think, how to innovate, and how to survive and prosper in the era of globalization".

Satish Joshi, CEO

BACKGROUND OF SANDHAR AUTOMOTIVES

OVERVIEW

Company: Sandhar Automotives, Dhumaspur

Location: Gurgaon, NCR

Programme period: June 2007 Nov. 2009 (30 months)

Number of employees: 268 (2% female workers)

Core products & processes: Mirror assemblies and mirror plates manufacturing

Average annual turnover: INR 680 million (USD 15 million)

Value of exports: INR 0.3 million (USD 6,700)

Tier: 1

KEY CHALLENGES FACED

The company faced continuous repetitive customer complaints and high internal PPM, mainly due to the following reasons:

- » Limited motivation of employees at work and no team-work spirit
- » Limited incentives to contribute to improvements (strict adherence to tasks mentioned in job descriptions)
- » Lack of training opportunities for workers
- » No clear differentiation of roles and responsibilities of managers, engineers and supervisors
- » Continuous problems with quality levels of products

ASPIRATIONS AND AIMS

- » To achieve zero customer complaints and reduce in-house rejection PPM (Parts Per Million)
- » To improve the Overall Equipment Efficiency (OEE) of all machines by reducing machine breakdown time.

Case Study #4:

Sandhar Automotives, Dhumaspur

Storage of Bins



Before



After

Sandhar Automotive (Mirror Division) is a manufacturing unit of the Sandhar Group of companies located at Dhumaspur, Gurgaon. Mr. Jayant Davar, an entrepreneurial young engineer, started the company. He set up the first manufacturing unit in 1985 in a shed hired to make stampings of sheet metal parts. He established a second unit in 1989 for manufacturing locking systems for Hero Honda motorcycles. The company had a technical collaboration with Honda Lock Manufacturing Company, Japan. The rear-view mirror division started operations in 1993 for two-wheelers being made by Hero Honda and TVS-Suzuki. The unit at Dhumaspur was established in 1999 with 160 employees supplying mirror assemblies only for a single customer, namely Hero Honda Motors Ltd. New business opportunities were explored and, by the year 2004, new customers from the four-wheeler segment were introduced like Tata Motors Ltd, Eicher Motors Ltd, Ashok Leyland, etc. Sandhar Automotives initiated some major activities to sustain and improve the business performance of the company. As a result, the company obtained various certifications like ISO/TS-16949, OHSAS-18001, and ISO-14001.

Despite the above-mentioned efforts, high customer returns and in-house rejection were some of the ever evolving challenges. The reasons were found to be rooted in poor commitment levels amongst employees and workers, and lack of ownership over activities, machines and processes in general. The motivation amongst employees was low resulting in high absenteeism rates and thus affected aspects like quality and productivity.

In the beginning of 2007 Sandhar Automotives received a communication from UNIDO and ACMA inviting the company to join their Business Partnership Programme and receive technical support in implementing a company-wide process of continuous improvement based on lean manufacturing principles and Total Employee Involvement (TEI) tools.

VISION STATEMENT

To be the most preferred choice of global stake holders.
(This is the vision of Sandhar Group, which disposes of manufacturing units in Europe and Asia Pacific).

MISSION STATEMENT

To be the leading player in global markets with fully satisfied stakeholders, maintaining cost effectiveness through innovative technology, and achieving optimum utilization of talent and resources.

Case Study #4:

Sandhar Automotives, Dhumaspur

SANDHAR'S JOURNEY TROUGH THE PROGRAMME

Monthly Kaizen award ceremony



Team-building exercise



The programme started in Sandhar Automotives at Dhumaspur in June 2007 and lasted for a period of 30 months. The counsellor, Mr. Sanjeev Prabhakar guided the company for the first 15 months and then Mr. Ashok Verma took charge from him. He visited the company three times in every two months and reviewed the actions and improvements achieved. He also identified areas of concerns and challenges, provided inputs on all steps of the roadmap and assigned new tasks to the team at Sandhar.

During the entire journey, the counsellor was continuously giving stress on the importance of 1S-2S, safety and total employee involvement to organize the work place.

A set of 32 key indicators (e.g. scrap clearance frequency, absenteeism, accident frequency and severity, customer return and in-house PPM) was introduced step by step, regularly monitored in the course of daily work management, as well as during Monthly Review Meetings (MRM) with other companies in the cluster.

OVERCOMING THE EMPLOYEE MOTIVATION CHALLENGE:

When Sandhar entered the programme, a major concern was the lack of involvement of people in improvement activities, high absenteeism and issues related to quality. To overcome these hurdles, a methodology was developed with the help of the counsellor. The main steps were:

1. Continuous training and awareness on technical as well as behavioural topics like working in a team and alignment of individual roles and responsibilities with respect to company's goal.
2. Communication to all employees through CEO's monthly address.
3. Special incentive/award schemes for best suggestions/*kaizens* and quality circles during CEO's monthly address. Monthly best attendance award i.e. certificate of merit was given to employees on monthly basis by the CEO.

The objective was to make things interesting and simple in doing. People started to realize their self-worth and the importance of working together as a team for common success. They felt a sense of belonging through clear communication, ownership of tasks / processes / machines, public appreciation and family get-togethers.

OTHER INITIATIVES TAKEN TO RAISE EMPLOYEE MOTIVATION AND SATISFACTION

- » Birthdays of all employees were celebrated by giving greeting cards and "best-wishes-e-mails". The objective of this measure was to create a more amicable working atmosphere.
- » All employees and their family members were covered by a medical scheme to get treatment free of charge in prescribed hospitals.
- » Organizing family-get-together events such as the Annual Day Celebration for Social Interaction and Camaraderie. This helped the employees and their families to establish a strong bonding with the company and also form better relations with each other.
- » Team building camps arranged for employees with interesting, strenuous exercises and games including hiking and tracking.

Case Study #4:

Sandhar Automotives, Dhumaspur

Training on shop-floor in Kaizen gallery



Daily customer complaint tracking board



Problem-solving by operators



Joint Gemba review for quality problems



OVERCOMING THE DAILY WORK MANAGEMENT (DWM) CHALLENGE:

To improve the daily communication across the company and to achieve the performance targets of the departments, a special PDCA (Plan, Do, Check and Act) approach for effective DWM was worked out. Based on annual business Key Performance Indicators (KPI) of the company, a company-wide organization structure was reviewed and finalized. All department-level KPIs were defined, aligned with respect to the overall company KPIs and communicated to all concerned employees. Keeping KPIs as the main objective, roles and responsibilities of all employees were defined and documented in a role and responsibility matrix. The review frequency of all KPIs was finalized, and a review calendar was prepared to ensure the adherence of reviews.

Each department was given a specific KPI board for internal review, communication through sunrise meeting (production plan vs. achievement, rejections or other issues like machine breakdown), production, Red Bin (analysis of defective parts) and TQM meetings, among others, with focus on *Gemba (Work place)*.

With DWM taking the right direction, employees felt more connected with each other and reflected on their role and responsibilities by giving suggestions/*kaizens*, problem-solving through small group improvement activities like Cross Functional Teams (CFT) and quality circles.

Other DWM Initiatives taken:

- » As more inter-departmental meetings and reviews were taking place, a need was felt to impart special training to employees like problem-solving, product awareness, time management, presentation skills, delegation, negotiation and team work, etc.
- » The annual training calendar was regularized for such topics.

DEALING WITH THE QUALITY CHALLENGE:

At the start of the programme, there were many repeated customer complaints about the quality of products, such as e.g. waviness on the edges, scratches and chip off. Over and above in-house rejection PPM was also high. Major emphasis was placed on fast and timely communication and building up a problem-solving mind-set. A common quality status board was placed right in front of the company's main entrance with daily updates on customer concerns for all employees to be aware.

Simultaneously, as an integral part of 2S, special emphasis was given on visuals related to quality. For example, all Standard Operating Procedures (SOP) were standardized in local language with coloured photos and sketches for the operator to understand and differentiate between good and bad parts. Also, all workstations had "Good" and "No Good" actual part samples displayed for easy understanding.

Workstations for specific tools and shadow boards were made to avoid tool searching time. Red Bins were provided at all work stations to clearly differentiate defective parts for better analysis and to avoid mixing them with good parts.

A daily production meeting ensured daily reviews of customers' concerns and a fast response was given to them through a Why-Why Analysis/ Quality Control (QC) story approach - problem-solving technique based on the examination of facts and data, with no speculation.

To improve internal rejection PPM, daily PPM tracking was done at *Gemba* by the production and quality-in-charge. Red Bin analysis meetings were conducted to discuss, verify and analyse the defects on the same day at the *Gemba*.

Case Study #4:

Sandhar Automotives, Dhumaspur

OUTCOMES

CUSTOMER FEEDBACK

“Sandhar Automotives has some processes which are human skill-based. For consistent quality and deliveries a lot of training and commitments are required. With the help of the UNIDO Programme, Sandhar Automotives has been able to address many such needs like quality orientation and a problem-solving attitude by total employee involvement and *Kaizen* culture. A new proactive approach is visible in their working, which is a must for future growth and a strong business relationship.”

*Sanjay Desai (TATA Motors Ltd.)
Senior Manager VD*

Excellent case study award at QCFI Convention 2009



KEY RESULTS

- »Employee involvement in 1S and 2S improved from 20% to 80%
- »Training days increased from 0.8 to 2.4 per year
- »Absenteeism rates decreased from 10.6% to 6.12% in 30 months
- »Production/manhour improved from 23.28 to 42.81
- »Inventory turn ratio improved from 34.38 to 50.30
- »Customer returns reduced from 8,734 to 216 PPM
- »Internal rejection reduced from 31,233 to 8,126 PPM.

The company benefitted both on operational and commercial grounds. Employees had strong bonding with the company with increased customer satisfaction.

To increase productivity was a challenge. The team did many improvements like increasing the number of pieces per hour on the convexing machine from 1,080 pieces per hour to 1,680 pieces per hour. To achieve that, a new layout for component placing on bricks was designed to incorporate 4 pieces/brick instead of 3 pieces/brick. Also, the number of bricks was increased from 36 to 42.

Overall, the company was able to make cost savings of 1.6 million INR by implementing 1,113 *kaizens*. They formed 13 quality circles (SGA) to reduce customer complaints to zero, customer returns to just above 200 PPM and in-process PPM by more than 70%.

The company achieved a sales turnover growth of 24.5% from 54crores to 68 crores and added four new customers. The company started supplying to OEMs like TAFE and Mahindra & Mahindra. The visiting representatives from the OEMs found good manufacturing practices like 5S implemented effectively on the shop-floor. They also found that the visual controls displayed on quality parameters were understood and practised by the operators as per the displayed operating standard..

The company won awards at various forums for quality circles like QCFI, CII, ACMA and Hero Honda Motors Ltd. The company was awarded by Hero Honda Motors Ltd. in its “Green Vendor Development Project” for two years in a row. The programme was conducted by the customer Hero Honda in which consultants were appointed to reduce hazardous wastes to improve the energy conservation level when it comes to fuel and electricity but also the recycling of water used in the production process.

IMPROVEMENTS			
	Before	After	Change (%)
Productivity (Production/man hour)	23.26	42.81	+84
Absenteeism in %	10.6	6.12	+42.26
Scrap Yard area (Sq. Mtrs.)	80	40	+50
Customer returns	8,734	216	+97.52
OEE	50.54	85	+68
Defect due to Machines (Nos.)	242	22	+90.90
VAPCO	2.8	4.41	+57.5
Accident Severity Ratio	23.6	0	+100
In-process Rejection	31,233	8,126	+73.98
Inventory turn ratio	34.38	50.3	+46.30
WIP (Days)	3	1	+66
New customers added			4
New products added			7
Tangible savings in operating costs (US\$ / year)			40,000

Note: Positive trend mark will be '+' and negative trend mark will be '-'.

Case Study #4:

Sandhar Automotives, Dhumaspur

FUTURE OUTLOOK



THE SUSTAINABILITY CHALLENGE

During the sustenance phase of the 30-months programme, all companies agreed to maintain all the best practices learnt in the course of the journey. The management of Sandhar decided to prepare internal review schedules to keep track of all the parameters introduced during the programme by the CEO on a monthly basis. Internal champions will be appointed which will be responsible for drive continuous improvement in all the indicators. A sort of internal clustering will be initiated in all zones of the company.

In order to ensure sustenance the company will follow the “TRDAV” approach, encompassing following elements: Training, Roles and Responsibilities, Daily Work Management, Activity Calendar and Visual Management.

FUTURE TARGETS

- » Tracking of and improvements in the skills matrix of employees in 2010-11
- » Achieving zero customer complaints by the end of 2010
- » Reducing internal PPM by 50% by 2012
- » Achieving 100% employee involvement in improvement activities by the end of 2010

Case Study #4:

Sandhar Automotives, Dhumaspur

CONTACT DETAILS:

SANDHAR AUTOMOTIVES-DHUMASPUR,
(A unit of Sandhar Technologies)
Village Dhumaspur, P.O. Badshahpur,
Gurgaon 122101, Haryana (India)

Phone: 0091 - 124 - 3298372
Web: www.sandhargroup.com
E-mail: sp.kamboj@sandhar.in