



Progress @ TPM



The Newsletter from TPM Club India

Newsletter

Special Issue

April 2010

INSIDE

Award for Excellence in Consistent TPM Commitment

J K Paper Ltd., Central Pulp Mills	2
J K Paper Ltd., J K Paper Mills, Jaykaypur	3

Award for TPM Excellence, Category A

AQUAGROUP	4
Chennai Petroleum Corporation Ltd., Cauvery Basin Refinery	5
Hi-Tech Gears Ltd (Group)	6
Indian Oil Corporation Ltd., Guwahati Refinery	7
PepsiCo India Holdings Pvt. Ltd., Frito Lay Division, Kolkata Plant	8
Sundaram-Clayton Ltd., Padi Plant	9
TATA STEEL PROCESSING AND DISTRIBUTION LTD., HR Plant & CR Plant, Jamshedpur	10
Award Status	11
2009 TPM Awards Ceremony Photos	12

FROM THE CHAIRMAN'S DESK

Dear Members,

Indian industry and the industry in the world in general has seen off a very difficult year 2009. It has been so severe that it has crippled many economies. 2010 is looking much better with the quarter results moving northwards. We hope the worst is behind us.

Even during these difficult times 73 companies from across the globe challenged the TPM Awards Assessment process very successfully. The results from these companies are phenomenal. The success stories of Indian companies are covered in this newsletter. The results truly reflect the importance of TPM and how it supports companies even during the difficult times.

On March 11, 2010 TPM Awards Ceremony was organised at Kyoto, Japan where the winners from companies outside Japan received the awards. This ceremony was attended by over 300 people making it memorable for these companies. With this year, 111 Indian companies have received a cumulative of 161 TPM Awards maintaining the trend of the largest number outside Japan. While wishing these companies "All the very best for many more", we would also urge the other Indian companies practising TPM to continue the Journey with great Vigour and the new companies to embark on the journey of TPM.

TPM brings all the people together in the organisation for achieving great success.

Best regards

V Narasimhan



V Narasimhan
Chairman - TPM Club India
Executive Director - Brakes India Ltd

List of Award Winners Country Wise - 2009

Country	No. of Companies	Country	No. of Companies	Country	No. of Companies
Argentina	2	Germany	5	Poland	1
Belgium	1	Hungary	1	Spain	2
Brazil	2	India	9	Sweden	1
Canada	1	Israel	1	Taiwan	5
China	7	Japan	27	Thailand	18
Colombia	1	Mexico	1	Turkey	8
Ecuador	1	Netherlands	1	USA	3
Egypt	1	Pakistan	1	Total	100

List of JIPM TPM Award Winning Companies from India for the Year 2009

Award for Excellence in Consistent TPM Commitment

- J K Paper Limited, Central Pulp Mills
- J K Paper Limited, J K Paper Mills, Jaykaypur

Award for TPM Excellence, Category A

- AQUAGROUP, Aquapump Industries, Aquasub Engineering (Unit I, II, III, IV)
- Chennai Petroleum Corporation Limited, Cauvery Basin Refinery
- Hi-Tech Gears Ltd (Group), Hi-Tech Gears Ltd and Getrag Hi-Tech Gears (India) Pvt Ltd (Bhiwadi), Hi-Tech Gears Ltd (Manesar)
- Indian Oil Corporation Limited, Guwahati Refinery
- PepsiCo India Holdings Private Limited, Frito Lay Division, Kolkata Plant
- Sundaram-Clayton Limited, Padi Plant
- TATA STEEL PROCESSING AND DISTRIBUTION LIMITED, HR Plant & CR Plant, Jamshedpur

Award for Excellence in Consistent TPM Commitment

Company : J K Paper Limited
Factory : Central Pulp Mills, Fort Songadh, Dist. – Tapi (Gujarat)
Product : Wide Range of Printing & Writing Paper and Packaging Board
TPM Kick Off Date : 3 June 2002



Award for TPM Excellence - First Category : 2006
Award for Excellence in Consistent TPM Commitment : 2009

N K Agarwal
Executive Vice President (Works)

Company Profile

JK Paper Ltd., India's largest producer of branded papers is also a leading player in the Printing and Writing segment. It operates two paper plants in India, JK Paper Mills in Rayagada, Orissa, with a capacity of 125,000 tonnes per year and Central Pulp Mills, located at Songadh, Gujarat, with a manufacturing capacity of 1,15,000 tonnes per year paper and packaging board. Both the manufacturing units of the Company are ISO 9001:2008, ISO 140001:2004 and OHSAS 18001:2007 compliant. The plant currently operates at more than 120% capacity utilization, using contemporary technology. Central Pulp Mills was originally installed in 1966 and taken over by JK Organization in 1992. The unit was rehabilitated in 1993-94 and converted into a profitable venture.

Expectation from TPM

Central Pulp Mills was a sick unit when it was acquired by J K Paper Limited. We introduced TPM in the year 1999, as the only option for "Survival and Growth". TPM was kicked off on June 3, 2002. Successful implementation of TPM helped nurturing teamwork and continuous development of individual skills at all levels. Moreover it created lively, energetic healthy and safe work environment. It also helped us create a production environment free from breakdowns and technical disturbances by involving everybody in maintenance without heavily relying on mechanics or engineers. As a result Central Pulp Mills got "TPM Excellence Award – 1st Category" in the year 2006.

After feedback from TPM Excellence Award -1st Category Assessment in November 2006, system was upgraded and TPM Part -II was kicked off on April 30, 2007 to achieve higher levels of excellence. Meanwhile our business unit also started manufacturing Packaging Board installing 60,000 MT per annum capacity plant in the year 2007. The TPM organization was immediately extended and new TPM Circles formed. Sub-Committee structure revised to include Packaging Board activities. All these activities provided leverage in terms of operability and maintainability of equipments with lesser efforts. Our TPM initiatives cover a wide range from bringing out losses hidden within equipment and in entire production system by suggesting ways for reduction and elimination of these losses. Mill wide TPM deployment has given us good results. However, the pressure to improve competitiveness further has increased. We can not achieve our corporate long and mid term targets unless we adopt Innovative and Breakthrough TPM Activities for extra ordinary results. Success is not a destination, it is a journey. We are determined to carry on our relentless pursuit of TPM Excellence.

Achievement Area - Tangible Benefits

Category	Performance Indicators		UOM	BM (2001-02)	Part-I (2006)	Achieved (Part-II) (Jul-Sep'09)	
P	Production	Production Volume	Paper	Tons / Quarter	13,011	15,229	15,733
			Board		-	-	17,860
	Productivity	OEE	OEE (Paper)	%	86.8	93.1	94.78
			Availability	%	93.0	97.9	98.10
			Rate of Performance	%	93.0	95.7	97.07
			Quality Rate	%	98.7	99.4	99.53
			OEE (Board)	%	-	59.7	87.35
			Availability	%	-	72.6	91.67
			Rate of Performance	%	-	89.2	97.18
			Quality Rate	%	-	92.2	97.83
	Labour Productivity	Paper + Board	MT/Man/Qtr	9.87	13.77	28.32	
	Breakdowns	Number of breakdowns	Paper	Avg. nos. / Month	60	9	3
Board			Avg. nos. / Month	-	32	7	
Q	Quality	Customer Complaints	Paper	Avg. nos. / Month	8	4	1.00
			Board	Avg. nos. / Month	-	10	11
		Defect Rate	Paper	%	9.7	7.8	4.88
			Board	%	-	12.2	2.66
C	Cost	Manufacturing Cost	Paper	Rs. / Ton	22,077	28,005	33,584
			Board		-	-	35,180
D	Delivery	Despatch Efficiency	Paper + Board	%	97.00	100.00	100.00
S	Safety	Number of Accidents		Nos / Month	2.70	0.50	0.33
M	Suggestions	Number of Suggestions		Nos/Man/Year	0.21	2.50	2.5

Note : BM - II for Packaging Board Plant started operations in 2007

Award for Excellence in Consistent TPM Commitment

Company : JK Paper Limited
Factory : JK Paper Mills, Jaykaypur, Rayagada Dist, Orissa
Product : Paper (Copier, Bond, Maplitho), Boards, Coated Paper & Pulp
TPM Kick Off Date : 19 March 2001



Award for TPM Excellence - First Category : 2006
Award for Excellence in Consistent TPM Commitment : 2009

M C Goel
Executive Vice President (Works)

Company Profile

JK Paper Limited is one of the leading manufacturer of printing and writing papers in the country with an annual production capacity of 2,50,000 MT manufactured in two units namely JK Paper Mills in Orissa and Central Pulp Mills in Gujarat. The combined annual turnover is over 10000 Million rupees.

JK Paper Mills is an integrated Pulp and Paper Mill with 1,25,000 TPA capacity. The annual turnover is around 6600 million rupees. JK Paper has one of the best distribution networks in the country to reach the customer in time and to cater to their needs. Customer care has been one of the main focus of the organisation.

JK Copier, JK Copier Plus, Easy Copier, Excel Bond are some of the top notch brands of JK Paper and commands the highest realization from market compared to other domestic brands. Continuous upgradation of technology and product has made it possible to make JK Paper a quality leader in all its products.

Expectation from TPM

With increasing raw materials cost, reduction in the customs duty and effect of inflation along with the entry of new players in the market, JK Paper Mills was hard pressed for improving operation efficiency. It was then on the look out for an initiative to boost up its profit margin and thus embraced TPM in the year 2001.

After doing hard ground work, JK Paper Mills successfully challenged the "Award for TPM Excellence – First Category" in 2006. This honor is a rare achievement and JK Paper is the first Indian Integrated Pulp and Paper manufacturing company to have been conferred with these honors and is the 3rd Integrated Pulp and Paper manufacturing company in the whole world to be in this elite club.

To continue the journey of excellence, TPM Part 2 activities was kicked off on 24th Feb 2007 with the aim to challenge TPM Special Award by 2012. In Part 2 activities of TPM, JKPM New Production System was developed. Additionally, 3 new pillars namely, Process Innovation, Logistics and New Product Development were introduced. In our TPM journey the mills have successfully challenged "Award for Excellence in Consistent TPM Commitment" in 2009.

Competition, both domestic as well as international, is intense and there is a need to improve efficiency in all quarters. This called for a radical change in the mindset, culture and required an innovative and visionary approach.

Under the circumstances TPM acted as a great help and an efficient tool where all our employees extended their support and because of their commitment and passion coupled with unflinching support of the management, we could excel in our manufacturing efficiency.

Achievement Area - Tangible Benefits

Besides drastically improving the work environment, there have been radical changes in equipment conditions, shopfloor cleanliness and above all a change in attitude and mindset of people. The company could achieve excellence in all facets of its business.

Over the years production profit increased by 40%, Production volume increased by 30%, OEE improved by 30%, Maintenance cost reduced by 25%, Breakdowns went down by about 95%, Accidents reduced by 86% and the consistent quality level could reduce the customer dissatisfaction by over 90%.

We are committed to sustain TPM activities; for us TPM is a journey, not a destination.

Award for TPM Excellence - Category A

Company : AQUAGROUP
Factory : Aquapump Industries, Aquasub Engineering Unit I, II, III, IV
Product : Domestic & Agricultural Water Pumps and Pumping Systems
TPM Kick Off Date : 26 December 2005



R Kumaravelu
Managing Director

Award for TPM Excellence - First Category : 2009

Company Profile

AQUA GROUP with years of experience in the water pump industry has been growing progressively since 1976. Currently the Group has Seven Units (Three of them are captive units producing Ferrous & Non Ferrous Castings and Electrical Laminations) located within five kilometers from the Corporate Office in Coimbatore, Tamil Nadu, India produces over 1600 models comprising of

- Single Phase Domestic pumps & Jet pumps and Bore well Submersible pumps in the brand name "TEXMO"
- Agricultural Mono blocks, Open well Submersibles and Electric Motors, Sewage pumps, Vertical High Pressure Multi Stage Stainless Steel pumps and Pressure Boosting Systems in the brand name "AQUATEX"

and caters to the market through a network of 18 Sales Branches & over 1000 Dealers.

These products are exported in the brand name "atx". The Group has bagged the Exports Excellence Award for 7 years during the period 1999 to 2008.

Products are marked for Five Star rating for Energy Efficiency and CE compliance.

Expectation from TPM

To become Highly competitive in the market and World Class in manufacturing through

- Productivity improvement
- Employee integration
- Skill enhancement and
- Loss elimination

in a safe and clean environment.

Achievement Area - Tangible Benefits (From 2005)

- Sales turnover increased by 79 %
- Finished product inventory reduced by 72 %
- Production increased by 58 %
- Breakdowns reduced by 65 %
- OEE increased from 77 % to 88 %
- Under warranty complaints reduced by 58 %
- Quality defects reduced by 42 %
- Consumable cost reduced by 42 %
- Tooling cost reduced by 52 %
- Maintenance cost reduced by 54 %
- Delivery improved to 98 %
- Major accidents eliminated
- Suggestions / employee increased from 2 to 8
- MTBF improved by 87 %
- MTTR improved by 33 %

Award for TPM Excellence - Category A

Company : Chennai Petroleum Corporation Limited
Factory : Cauvery Basin Refinery
Product : Petroleum
TPM Kick Off Date : June 2005



N V Kalaivanan
General Manager (CBR)

Award for TPM Excellence - First Category : 2009

Company Profile

Chennai Petroleum Corporation Limited (CPCL) formerly known as Madras Refineries Limited (MRL) was formed as joint venture in 1965 between Government of India (GOI), AMOCO and National Iranian Oil company. It became a group company of Indian Oil in the year 2000. CPCL has two refineries with a combined refining capacity of 10.5 MMTPA. CPCL Manali has a refining capacity of 9.5 Million Metric Tonne per Annum(MMTPA). It is one of the complex refineries in India with Fuel, Lube, Wax and Petrochemical feedstocks production facilities. CPCL's second refinery located at Cauvery Basin at Nagapattinam is established with a capacity of 1.0 MMTPA and has a captive Oil jetty to receive Crude oil and dispatch Petroleum Products. CPCL – CBR has 0.21 MMSCMD capacity LPG recovery unit to recover LPG from oil well gas. It has also set up a gas compressor unit to utilize low pressure gas from oil wells of ONGC. Cauvery Basin refinery is the first refinery in India to get ISO certification in the year 1994. CPCL achieved highest turnover of Rs.36489.7 crore in the year 2008-09.

Expectation from TPM

- To maximize the capacity utilization and value addition by debottlenecking the existing facilities through Focused improvement and Development Kaizens.
- To eliminate equipment break down & plant upset by integrated effort of process and maintenance departments.
- To achieve / sustain zero break down, zero defect, zero accident, zero losses in all areas of refinery through TPM 8 pillar approach.
- To consolidate and improve upon the culture of collective participation of all employees achieved through PM to maximize potential.
- To improve and sustain 100 % customer satisfaction.
- Skill upgradation of operators and technicians to reduce/ eliminate process and equipment related defects.
- To bring about a cultural change in the working atmosphere by practising “ownership” concept by all employees for creating safe and pleasant working environment.

Achievement Area – Tangible Benefits

Criteria	Parameter	Unit	BM 05-06	06-07	07-08	08-09	Apr to Dec 09	Pillar Linkage										
								Change	KK	AM	PM	QM	E&T	OTPM	DM	SHE		
P	Crude throughput	TMTPA	682	823	650	418	386	↔										
	Gas throughput	TMTPA	35.7	72.2	77.3	76.6	69.8	↑										
	Energy factor	MBN	166.9	131.2	130	133.8	130.6	↑										
	Fuel & Loss	% on crude	4.09	4.5	5.47	6.82	5.9	↔										
	Plant Availability Factor	%	95	95.9	95.1	80.3	94	↑										
	OPE	Rs in Million	226	233	236	278	204	↓										
	File Retrieval time	Min	30	25	20	5	0.5	↓										
Q	Distillate Yield	%wt	78.5	81.4	80	78.2	77	↔										
C	Turn over	Rs in Million	17760	17249	16279	13665	11193	↔										
	Net Margin	Rs in Million	34	58	73	-2	100	↑										
	Store Inventory	Rs in Million	50.3	46.6	67	73	67	↔										
D	Dispatch	TMTPA	696	584	476	412	395	↔										
S	Fatal Accidents	No	0	0	0	0	0	↔										
	Minor Accident Employee	No	0	0	0	0	0	↔										
	Nearmiss Incident	No	30	60	285	300	243	↑										
	Oil & Grease in Effluent	ppm v	<1	<1	<1	<1	<1	<1	↔									
	Suspendant in effluent	ppm v	15.1	13.7	13.1	11.1	15.4	↔										
	BOD in treated water	ppm v	4	5.8	5.1	4.8	3.9	↓										
	Stack Emmission (SO2)	mg/M3	26.1	28.52	22.86	20.48	13.08	↓										
M	Suggestions	No	8	12	46	101	106	↑										
	Kaizens	No	18	30	30	68	149	↑										
	OPLs	No	155	190	242	200	220	↑										

Strong Relation

Secondary Relation

Award for TPM Excellence - Category A

Company : Hi-Tech Gears Ltd Group (HGL Group)
Factory : Hi-Tech Gears Ltd and Getrag Hi-Tech Gears (India) Pvt Ltd (Bhiwadi),
Hi-Tech Gears Ltd (Manesar)
Product : Auto Transmission Components – Gears, Shafts, Flanges etc
TPM Kick Off Date : 06 June 2006



Pranav Kapuria
Deputy Managing Director

Award for TPM Excellence - First Category : 2009

Company Profile

Hi-Tech Gears Ltd Group, or simply HGL Group, is a part of HI-TECH Group and is in the business of Manufacturing transmission related auto components such as Gears, Shafts, Flanges for two wheelers, four wheelers and engines, in addition to Precision forgings.

HGL Group caters to the need of various customers through 3 Plants namely, Hi-Tech Gears Ltd (Bhiwadi), Getrag Hi-Tech Gears (India) Pvt Ltd (Bhiwadi) and Hi-Tech Gears Ltd (Manesar). They are located near New Delhi, (with in the distance of 45 to 75 Kilometers) and commenced the operations from year 1987, 2000 and 2005 respectively. All the plants are certified for Quality Management System (ISO/TS 16949), Environmental Management System (ISO 14000) and Safety and Health Management System (OHSAS 18000).

HGL Group has strategic alliances with M/s Mushashi Auto Parts Ltd, Japan and Getrag Corporation, USA and supplies the products to well known customers Hero Honda, Cummins, Cater Pillar, Bosch, New Holland, Honda, Lister Petter etc covering Asia, Europe, North America and South America continents.

Expectation from TPM

- Maximize capacity utilization
- Supply of high quality products to customer
- Minimize cost of operations
- On time delivery and inventory reduction
- Lead time reduction in manufacturing and new product development
- Safe, hygienic and environment friendly work places
- High skill and high morale employees
- Offices oriented for excellent support for manufacturing
- Promotion of continuous improvement culture
- Effective realization of 5 satisfactions namely, customer, employee, social, global and share holders

Achievement Area - Tangible Benefits

Our manufacturing excellence journey has improved the operational and financial measures and some of the key benefits achieved are shown below: (From June 2006)

Productivity : Plant OEE, increased from 46 to 73.1%
Breakdowns, reduced to one-fifth

Quality : Customer Complaints, reduced to one-twentieth
Defects, reduced to one-fifth

Cost : Production cost, reduced by 9%

Delivery : Delivery rate, increased from 83.8 to 99%
Inventory amount, reduced by 20%

Safety : First aid cases, reduced to one-third

Morale : Number of Improvement themes carried out are 470
Number of Kaizens done from Apr 2008 is 14976

Award for TPM Excellence - Category A

Company : Indian Oil Corporation Limited
Factory : Guwahati Refinery
Product : Petroleum Products
TPM Kick Off Date : 29 October 2004



G Bhanumurthy
Executive Director

Award for TPM Excellence - First Category : 2009

Company Profile

Guwahati Refinery, the first Public Sector refinery of the country, was commissioned in 1962 with a capacity of 0.75 MMTPA and subsequently de-bottlenecked to 1.0 MMTPA. Including subsidiary CPCL, it is a part of 10 of India's 20 refineries operating under IOCL ownership with a combined refining capacity of 60.20 MMTPA. Apart from a Captive power plant of 28 MW with automatic load shedding facility, secondary processing units like ISOSIV, DCU, LRU, HGU, HDT, SRU and INDMAX are in operation for producing quality Petroleum Products.

Expectation from TPM

Total Productive Maintenance at Guwahati Refinery paved way for establishing a structured learning organization having no barriers between production, maintenance and other service groups, with improved work culture and visually improved work places, encompassing entire gamut of operation, safety, maintenance, inspection & training, having focus on loss reduction and reliability improvement for sustained run length of plants and machineries that will lead to enhanced Over All Plant Effectiveness.

Achievement Area - Tangible Benefits

CRITERIA	INDICATOR	UNIT	BM	08-09	APR' 09 TO DEC' 09	PILLAR LINKAGE (✓ For strong relation)								
			04-05			Better	AM	KK	PM	QM	E&T	OTPM	EM	SHE
GENERAL	CRUDE THROUGHOUT (% OF CRUDE ALLOCATION)	TMTPA	1002 (100%)	1076 (100%)	1117 (100%)	↑	✓	✓	✓	✓	✓			
	GRASS MARGIN	US \$ / BBL	11.9	16.3	17.1	↑	✓	✓	✓	✓				
	YIELD (% OF CRUDE PROCESSED)	%	80.6	82.4	83	↑	✓	✓	✓	✓				
P	MTBF	Days	587	996	1117	↑	✓	✓	✓					
	MTTR	Days	5.2	3	3	↓	✓	✓	✓					
Q	CUSTOMER COMPLAINTS	No./Yr	0	0	0	↓				✓		✓		
	INTERNAL SAMPLE FAILURES (HSD)	No./Yr	0	1	0	↓				✓	✓		✓	
C	ROUTINE MAINTENANCE COST	Rs. Million	25.4	18	12	↓	✓	✓	✓	✓			✓	
	ENERGY FACTOR	MBN	76	67	64.5	↓	✓	✓	✓		✓			
D	STORE INVENTORY	Inventory Ratio	16.71	13.62	10.43	↓	✓		✓		✓	✓		
S	MAJOR FIRE	No./Yr	0	0	0	↓	✓		✓		✓			✓
	MAJOR ACCIDENTS	No./Yr	0	0	0	↓	✓		✓		✓			✓
M	KAIZEN / SUGGESTIONS (CUM)	No	42	2137	2944	↑	✓	✓	✓	✓	✓	✓	✓	✓
	OPLS (CUM)	No	80	2118	2520	↑	✓		✓		✓			✓

Award for TPM Excellence - Category A

Company : PepsiCo India Holdings Private Limited (Frito Lays Division)
Factory : Kolkata Plant
Product : Potato Chips & Kurkure
TPM Kick Off Date : 7 November 2005



Award for TPM Excellence - First Category : 2009

Partha Gangopadhyay
Vice President - Plant Operation

Company Profile

Kolkata plant started the operation in 2004. The plant is located on a 14 acres land with buildup area of 10870 sq.mtrs. The average daily production capacity of 80 MT. per day comprising of Lays, Uncle Chips & Kurkure mainly catering eastern and central part of India. There are 147 operatives & 37 Management staff operating the plant. The average age of operatives is 27 years & management staff is 33 years.

Expectation from TPM

PepsiCo has a vision "To continue to be the fastest growing convenient food company in India by delighting the hearts and minds of all stakeholders". To achieve this vision the organization came out with following strategic imperatives.

To achieve this we observed that at that point of time Kolkata plant was having

- High wastages in production lines
- No systematic approach to capture & attack the losses.
- Higher break downs frequency
- Lack of equipment competency
- Higher safety incidences

To come out of this situation and get the fruits we required a tool that could help us in a systematic manner providing multi dimensional benefits. We realized that TPM is the best vehicle to drive operations strategic imperatives. The key initiatives in our journey to manufacturing excellence are:

- TPM Introductory training at all levels with structured TPM Pillars approach
- 100% employee participation through circle activities
- Continual improvements on Productivity, Quality, Cost, Delivery, Safety & Morale
- Build a motivating work environment for employees to participate in developing OPL, Kaizens for the continuous

Achievement Area - Tangible Benefits

KPIs	Sr. No.	Parameter	Unit of Measurement	Better	Level 0					Level 1	Responsible Pillars	
					Benchmark 2005	Actual 2006	Actual 2007	Actual 2008	Target 2009	Actual as on YTD September '09	Primary	Secondary
Productivity	1	OEE of Plant	%	↑	81.76	86.04	88.33	94.03	94	94.57	KK	JH, PM, QM
	2	Manpower Productivity in Potato Chips Lines	Kg/Man-hr	↑	23.71	31.54	32.39	36	38	39.27	KK	JH, PM
	3	Manpower Productivity in Kurkure Lines	Kg/Man-hr	↑	35.17	47.61	48.27	50.43	51	51	KK	JH, PM
	4	Breakdown Occurrence in Potato Chips Line	Nos./Year	↓	301	151	110	34	25	17	PM	JH, E & T
	5	Breakdown Occurrence in Kurkure Line	Nos./Year	↓	277	157	128	37	28	23	PM	JH, E & T
Quality	6	Customer Complaints	Nos./Year	↓	27	0.0	0.0	0.00	0	0	QM	JH
	7	On line-leaky Packets	%	↓	1.21	0.3	0.2	0.14	0.14	0.14	QM	JH, KK
Cost	8	Energy Usage	KWH/Kg	↓	2.22	1.87	1.77	1.74	1.7	1.65	KK	PM, JH
	9	Packaging film wastage	%	↓	1.53	0.62	0.6	0.48	0.4	0.34	KK	JH, QM
	10	Controllable Finished Product Waste : Potato Chips	%	↓	2.18	0.85	0.85	0.51	0.48	0.46	KK	JH, QM
	11	Material Efficiency : Kurkure	%	↑	95.54	96.21	96.81	97.19	97.5	97.55	KK	JH, QM
	12	Repair & Maintenance Cost	Rs/Kg	↓	1.14	0.96	0.99	1	0.98	1	PM	OTPM
Delivery	13	Aligned Despatch Compliance	%	↑	80	96	89	97	97.5	98	OTPM	JH, KK
Safety	14	Loss Time Accident	Nos./Year	↓	13	0	0	0	0	0	SHE	E & T, JH
	15	Safety Incidents	Nos./Year	↓	43	39	19	14	0	4	SHE	E & T, JH
	16	Water Usgae	Lt/Kg	↓	15.41	12.42	11.7	7.62	6.5	6.38	SHE	KK
Morale	17	One Point Lesson	Nos./Person/Year	↑	0.96	2.1	4.26	7.42	8	12.49	E & T	KK, JH
	18	Kaizen	Nos./Person/Year	↑	0.14	1.23	2.3	3.08	4	3.67	KK	All Pillars

Award for TPM Excellence - Category A

Company : Sundaram-Clayton Limited
Factory : Die Casting, Padi Plant, Chennai
Product : Aluminium Castings
TPM Kick Off Date : 25 January 2006



P H Narayanan
President

Award for TPM Excellence - First Category : 2009

Company Profile

Sundaram Clayton Limited (SCL) is part of the \$4 billion TVS group, one of the largest auto components manufacturing and distribution group in India. SCL is a leading supplier of aluminium die castings to automotive sector.

Milestone on the Journey to Manufacturing Excellence

Prevailing conditions in 2004: Customers were demanding higher quality products at lower cost. Customers were increasingly choosing suppliers with best Q,C,D performance from across the world. Internally, the working conditions were not operator friendly and the losses like breakdowns, rejections, die changeovers, minor stoppages, start-up were high. Rapid improvements could not be made due to low people capability. TPM Kick-off: Management identified TPM as effective business tool to improve the internal situation and reduce losses and effectively manage the external challenges.

TPM journey started in 2005 with the aim of achieving manufacturing excellence. TPM Policy has been formulated to

- Achieve customer satisfaction through supply of products of right quality at the right time and at the right place.
- Improve overall line effectiveness by eliminating losses through Total Employee Involvement and Continuous Improvements.
- Create cheerful and safe workplace companywide.

TPM organisation was formulated with steering committee headed by the President of the company. Companywide TPM awareness training was conducted and pillar teams was formed to make all employees participate in TPM movement.

TPM Implementation: To demonstrate the benefits of TPM activities, two Model machines were identified and the eight pillar activities were implemented. Breakthrough improvements were achieved in the model machines. High level of motivation was created for implementation of TPM by sharing these benefits company-wide. After the successful implementation of TPM in the model machines, company-wide implementation plan was prepared incorporating the learnings from the model machines. KMIs, KPIs and KAIs for all the pillars were set and deployed. Standardisation and training were taken as key elements in horizontally deployment phase of TPM implementation company-wide.

Benefits Achieved

The tangible benefits achieved through implementation of pillar activities are:

	S.No.	Key Performance Indicators	Results achieved
P	1	Overall plant effectiveness	Improved by 30%
	2	Employee productivity	Improved by 2 times
	3	Machine breakdown	Reduced by 90%
Q	4	In-house rejection	Reduced by 75%
	5	Customer - end line rejection - As cast parts	Reduced by 60%
	6	Customer - end line rejection - Machined parts	Reduced by 99%
C	7	Manufacturing cost	Reduced by 25%
D	8	Line stoppage at customer end	Achieved zero line stoppers
	9	Product delivery performance	Achieved 100%
M	10	Suggestion implemented	Increased by 2 times
	11	Employee participation - Suggestion	Achieved 100%
	12	Quality control circle projects implemented	Increased by 3 times
	13	Employee participation - QCC	Achieved 100%
S	14	Major accidents	Achieved zero accidents

The intangible benefits achieved are:

1. Improving employee confidence for problem solving.
2. Enhancing employee capability.
3. Practicing structured methodology for plant performance progress.
4. Improving work environment by 3D elimination (Dirt, Danger, Dark).

Key to our Manufacturing Excellence:

The key drivers for successful implementation of TPM are:

1. Leadership commitment
2. Total employee involvement
3. Structured employee development

Award for TPM Excellence - Category A

Company : TATA STEEL Processing and Distribution Limited
Factory : Steel Processing Unit Jamshedpur
Product : Hot Rolled and Cold Rolled Steel
TPM Kick Off Date : 14 November 2005



Sandipan Chakravorty
Managing Director

Award for TPM Excellence - First Category : 2009

Company Profile

Tata Steel formed a 50:50 joint venture in 1997 with Ryerson Inc., USA, to promote a Steel Service Company, christened Tata Steel Processing and Distribution Limited -TSPDL headquartered in Kolkata. TSPDL pioneered the steel service center business in India and within a span of 12 years has positioned itself as the undisputed market leader in the rapidly evolving Steel Service Centre industry in India, starting with a meager turnover of Rs 1.8 Crores in 1997-98, and achieving turnover of more than Rs.1350 Crores in 2008-09, with a CAGR of more than 50% for last 5 years. TSPDL's current Business Strategy is oriented around the need to move into Stage 2//3 Steel Processing market offering higher value addition and also to grow the business of Stage 1.

TSPDL operates in India; TSPDL Jamshedpur units operate in Stage 1 processing. It has two distinct market segments - Product Sales and Tolling. The key customer groups are Automotive, Appliances, General Engineering and Construction. In Tolling, TSPDL offers processing services where the customers own the materials and TSPDL processes them as per the customers' specific needs. In Product Sales Model, TSPDL offers processed steel, where the materials are purchased by TSPDL from mills, processed and form as per customers' requirements, and sold to them.

Major Stage 1 processing include Hot rolled and Cold Rolled steel coil slitting, Precision Blanking, cut-to-length, roll-forming and corrugation.

The Tolling business constitutes 76% of the volume and 8.2% of the company's revenue and the Product Sales business accounts for the rest. In Product Sales, the company delivers its products to its customers through a combination of direct (96%) and retail channels (4%).

Expectation from TPM

- Increase sales turnover - by 100% by 2012
- Customer complains – zero by 2012
- Zero potential Hazards achievement by TPM thereby zero accidents. in all units by 2012
- Quality – Defect Rate reduction by 100%
- On-time Delivery - 100%
- Cost as % of sales - reduction by – 50% from Kickoff time
- High Morale of employees - Ideas 12 times from Kickoff by 2012

Achievement Area - Tangible and Intangible Benefits

General Management Improvements in
Sales Turnover – Increased by 81.75%
Profit – Increased by 8.25%

Cost (C) - Improvements in
Manufacturing Cost reduced by – 6.4%
Cost as % of sales reduced by – 43.15%

Productivity (P) - Improvements in
OEE increased by 51.5%
No of Breakdowns Reduced by – 95%
MTBF improved by – 12 times
MTTR reduced by - 62.87%

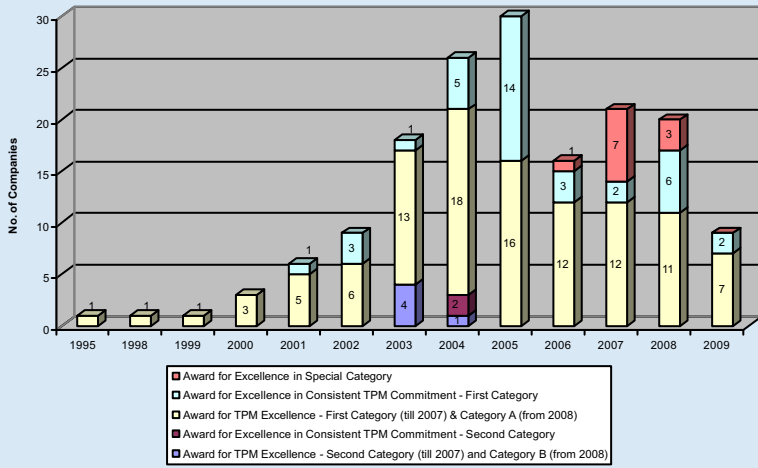
Delivery (D) - Improvements in
Dispatch Compliance improved by – 13.4%
Vehicle Turn around time reduced by – 55.5%

Quality (Q) - Improvements in
Customer Complains Reduced by – 90.5%
Defect Rate reduced by – 84.46%
Cost of Poor Quality Reduced by – 83.5%

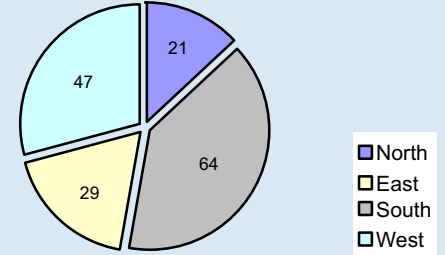
Safety (S) - Improvements in
Lost time Accidents reduced by – 100%

Morale (M) - Improvements in
No of suggestions improved by – 8 times

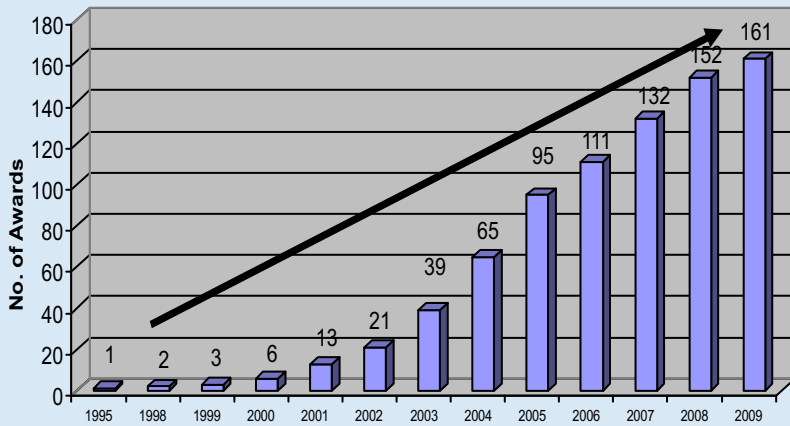
TPM Awards Trend in India



Regionwise Number of Award Winning Companies



TPM Awards in India (Cumulative)



Venue: Kyoto International Conference Centre



International Assessment Agencies Forum (IAAF)

KEYNOTE PROGRAM



*“Escape from the Global Recession”
The Innovative Lean Management by the TPM*

Tokutaru Suzuki
TPM Awards Assessor, JIPM



*“Toyota Kaizen & Accounting”
~J-Cost Theory and Proposal for its Applications~
New Evaluation Measure of Effective of Lead Time Kaizen*

Masatomo Tanaka
President of J-Cost Research Center,
Professor Emeritus, Institute of Technologists



“World No.1 Product Manufacturing Company ~Creation of New Values~”

Tokuyu Tanahashi
Plant Manager, Niisato Plant,
MITSUBA Corporation

Welcome Reception Performance by Maiko Girls / Drums



2009 TPM Awards Ceremony



J K Paper Ltd., CPM



J K Paper Ltd., Jaykaypur



Aqua Group



CPCL - CBR



IOCL - Guwahati Refinery



Hi-Tech Gears Ltd.



PEPSICO India Holding Pvt. Ltd.,
Frito Lay Div., Kolkata



Sundaram-Clayton Ltd., Padi



Tata Steel Processing &
Distribution Ltd., HR & CR Plant

Commemorative Photo Shoot



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