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Editorial Team

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Director General, ACMA

Chief Editors : Mr. Dinesh Vedpathak,
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One complimentary copy of "ACT Now" is sent to each member of ACMA. Additional copies are available @ ₹ 150/- for each copy. This cost is including service tax & postage charges.

Mr. Binny Tomy



Chairman's Message

Quality was earlier understood as 'meeting the specifications'. Today we take quality to mean as 'customer satisfaction'. Even today interpretation of 'zero defect quality' is different for different people. I think a paradigm shift needs to occur in our thinking and interpretation of Quality as we evolve as a manufacturing sector.

We normally associate Quality with the performance of the product only. We all know very well that a quality product can be made only with quality processes and quality systems and can deliver a good customer experience only with quality service. Perhaps we need to include all that and more when we say "Zero Defect Quality".

All of us are concerned about the impact on environment from the waste generated in the industry. Each one of us is trying to minimise the unfavourable impact on environment in our own best way. However, there is no structured approach or a curriculum that teaches us about eliminating such environmental impact.

The call by the honourable Prime Minister of India for making "Brand India" globally renowned for "Zero Defect, Zero Effect" Manufacturing – free from defects, and with no adverse impact on the environment is very pertinent and well timed. ACMA is committed to play its role in responding to the call and in this context has signed an MoU with CII to offer the industry a specialized 'ZED cluster program' with a theme of ZERO Effect & ZERO Defect. This cluster program will focus on bringing all aspects of manufacturing system under Zero Effect and Zero Defect. Aiming at sustainability the program will include New Product Development and Skill Development within its ambit. The program is scheduled to be launched by July'2015.

The recently held summit of the ACMA centre for Technology at Pune on the theme "Make in India – Beyond Zero Defect Quality – An ACT Approach" was a resounding success. The summit demonstrated the essence of manufacturing excellence journey through competitions, case study presentations, panel discussions and addresses by intellectuals from the industry. This issue of ACT Now shares with you the success story of this summit along with the winning case studies. I am sure that you will like this issue and also provide your valuable views.

Lastly, do not miss to apply for ACMA Awards this year. These have been announced on 27th March, 2015 and the details can be accessed at www.acma.in

Wish you all the best.

Srivats Ram

Zero Defect & Zero Effect Cluster

ACT Clusters are now considered as a proven approach to build manufacturing excellence in any auto component industry.

It is more than a decade when the first ACT Cluster was launched for just 14 auto component manufacturers. Since then, this movement has progressed leaps and bounds and till now more than 500 manufacturing units have been covered under various ACT cluster programs. This became possible because a number of intellectuals kept on gauging the needs of the industry at various intervals and also continuously helped ACT in launching new roadmaps.

As a further step, ACT has now joined hands with Confederation of Indian Industry (CII) to initiate a special cluster program on Zero Defect & Zero Effect. The cluster will be jointly supported by both of these organizations. Auto component industry will be served by ACT, whereas the rest of the industries will be taken care by CII.

It has been decided to initially start this cluster with 10-12 manufacturing units, half from auto component industry and non-auto component industry. This will be an two year improvement journey. The roadmap of this cluster will cover the following.

- TEI /5S/Must be Facilities
- Skill Development
- Zero Defects (Considering all aspects of Quality i.e. Quality of total business processes in entire supply
- New things in Zero Defects like Quality Roadmap /
- Zero Effect: Bringing all aspects of Production system under Zero effect.
- New product Development and New Product Introduction



(L - R) Mr. Srivats Ram, Chairman ACT & Past President ACMA and Mr. Jayant Davar, Co-Chairman, Cll-National MSME Council signing the MOU

(L - R Standing) Mr. Sandeep Balooja, Vice President ACMA, Shri Anant Geete, Hon'ble Minister for Heavy Industries & Public Enterprises, Govt. of India , Mr. Ramesh Suri, President ACMA, Mr. Vinnie Mehta, Director General ACMA, Mr. Amit Sanghvi, Counsellor, CII, Mr. Dinesh Vedpathak, Head Cluster Program

This cluster will be mentored by Mr. C. Narasimhan, Chief Mentor ACT and the counselling support will be provided by veteran; Mr. Dinesh Vedpathak, Head Cluster Programs – ACT. Mr. Vedpathak possess a vast experience of implementing change at various industries.

For Non-auto industry: CII has proposed the name of Mr. Amit Sanghvi as counsellor

An MOU in this regard has been signed between ACT and CII during First ACT Summit on 16th February, 2015. It has been planned to launch this cluster from June/July, 2015. Very soon this cluster will be announced by ACMA and entries will be invited from industry.

ACT Cluster Journey 6 MPD MSME (non Clocker SME Advan Emin. Excellenc Engy, Expellent Engg. Excellenc Esno, Excellence SME SME SME SME SME SWE Foundation Foundatio Foundation Faundation Foundation Faundation 2007 2009 2012 2015 2013 2014



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First ACT Summit

On theme "Make in India - Beyond Zero Defect Quality" Held on 16th & 17th February, 2015 at Pune



Shri Anant Geete, Hon'ble Minister for Heavy Industries & Public Enterprises, Govt. of India addressing the gathering

The manufacturing sector in India is the backbone of the Indian economy and the automotive sector is one of its biggest assets. By corollary, the auto component manufacturing fraternity is a vital part of the Economy. And if the auto industry remains healthy, the economy remains healthy.

For over 50 years, the Automotive components manufacturing association of India - ACMA - is working to facilitate a greater synergy between the various stakeholders of the Automotive component industry. The ACMA Centre for Technology - ACT was formed in the year 1989 with a mandate to provide technical support and service to ACMA members. ACT has delivered since, in multiple configurations, with available resources and professionals from the industry.

Since its inception in 1989, ACT has helped more than 500 manufacturing plants all over India through its signature ACT cluster programs. In year 2014, ACT completed 25 years in service to the Industry.

To commemorate completion of 25 glorious years of service by ACT, First ACT Summit was organized on 16th & 17th February, 2015 at Pune. In line with the Indian Prime Minister's agenda, the theme of this first ever "ACT-Summit" was "Make in India: Beyond Zero Defect Quality - An ACT approach".

The summit demonstrated the essence of manufacturing excellence journey through competitions, case study presentations, panel discussions and addresses from best knowledge individuals from the industry.

The major highlights of Summit included:

- Panel Discussions on "Zero Defect Quality" and "Industry - Academia interface"
- MOU Signing: ACMA CII ZED Cluster (Zero Effect & Zero Defect) - Competitions through 'Case Study Presentations' under 4 streams i.e. Zero Defect Quality (Customer delight); Environment -Conservation in Energy, Resources (Nature delight); TEI - Total Employee Involvement (Employee delight); Innovation - Technology, Productivity, Cost (Stake holders delight)
- Showcasing Cluster Learning from ACT Cluster Programs: ACT SME Cluster, ACT Foundation Cluster, ACT Advance Cluster and ACT Engineering Cluster
- Experience Sharing by ACMA Awards 2014 Gold **Award Winners**
- Release of Publications: ACT Journey Book Towards Excellence, ACT - Before After Journey Book and Book on Indian Production System.



Shri Anant Geete, Hon'ble Minister for Heavy Industries & Public Enterprises, Govt. of India, was the chief guest at a special session at this summit. Two books were released by the honourable Minister: (1) ACT Improvements Photo Gallery (Before & After) (2) ACT Journey-Towards Excellence.



Release of Publications

The inaugural session comprised of Mr. Srivats Ram, Chairman ACT and Past President ACMA, Mr. Ramesh Suri, President ACMA, Mr. Sandeep Balooja, Vice President ACMA. Mr. R. Seshasayee, Executive Vice Chairman, Hinduja Group India kindly joined this session as "Guest of Honour". This session started with screening corporate movie of ACMA Centre for Technology. During the same session, Dr. Ramani Narayan, Distinguished Professor, Michigan State University, delivered a very informative presentation on "Driving to Zero Effects - Environment & Sustainability": Focus on New & Best Practices for Selecting & Engineering Environmentally Sustainable materials.

Panel Discussion on "Zero Defect Quality"

Quality was earlier understood as 'meeting the specifications'. Today we take quality to mean as 'Customer Satisfaction'. Even today interpretation of 'Zero Defect Quality' is different for different people. A paradigm shift is required in our thinking and interpretation of Quality as we evolve as a manufacturing sector. We normally associate Quality



Panel Discussion on Zero Defect Quality

with the performance of the product only. We all know very well that a quality product can be made only with quality processes and quality systems and can deliver a good customer experience only with quality service. Perhaps we need to include all that and more when we say "Beyond Zero Defect Quality".

In keeping with the theme of the Summit, a Panel Discussion on "Zero Defect Quality" was organized on 17th February, 2015. Following intellectuals were a part of this discussion:

Moderator:

Mr. Jayant Davar, Past President, ACMA & Co-Chairman & Managing Director, Sandhar Technologies Ltd.

Panel Members:

Mr. Hemant Sikka, Executive Vice President, Chief Purchase Officer - Auto & Farm Sectors, Mahindra & Mahindra Ltd.

Mr. Sunil Arora, Managing Director, Abilities India Pistons & Rings Ltd.

Mr. Sunil Kaul, Group President - Technology & Innovation, Anand Automotive Ltd. & Managing Director, MAHLE Behr India Ltd.

Mr. Shailesh Sheth, Director & Strategy Adviser to BFW Ltd., ATE Group & KNF Pumps.

Mr. Rajeev Wasan, Sr. Vice President, Honda Cars India Ltd.

Mr. S. Dalvi, Vice President, Purchasing, Product development & QA, Toyota Kirloskar Motor Pvt. Ltd.

Panel Discussion on Industry - Academia Interface

The engineers fresh out of institutes today need a gestation period to start delivering to the industry. There is an imperative need to make these engineers & other college graduates 'industry ready' by giving them the required inputs at the institute level. ACT will work with Academia to design programs / course materials that will help our students become ready to



Panel Discussion on Industry - Academia Interface



be assimilated in the industry, immediately after college. Another area where institutes can work with the industry is 'research projects' - funded by the industry. These projects will aim at developing innovative products/technologies for the industry

With an objective to guide the industry ahead in this area, a Panel Discussion on Industry - Academia Interface was organized at the First ACT Summit. This panel comprised of following intellectuals who had a very informative discussion on the subject:

Moderator:

Mr. Deep Kapuria Past President, ACMA Chairman, The Hi-Tech Group

Panel Members:

Prof. Bhaskar Ramamurthi Director, Indian Institute of Technology Madras

Dr. Santosh Bhave Sr. Vice President - HR, IR, & Admin. Bharat Forge Ltd.

Mr. P. J. Mohanram Sr. Advisor, Indian Machine Tool Manufacturers' Association

Mr. M L Bapna Advisor, IIT Jodhpur, Advanced Leadership Initiative Fellow-2012 at Harvard University, Former CEO Tata Enterprises

Mr. Shrikant Marathe Former Director, ARAI

MOU Signing on Zero Defect and Zero Effect Cluster

ACT has now joined hands with Confederation of Indian Industries (CII) to initiate a special cluster program on Zero Defect & Zero Effect (ZED). The cluster will be jointly supported by both of these organizations. Auto component industry will be served by ACT, whereas the rest of the industries will be taken care by CII.

A MOU in this regard has been signed between ACT

and CII during First ACT Summit. It has been planned to launch this cluster from June/July, 2015.

Presentation by ACMA Awards Winners - 2014

ACMA Awards are among the most sought after recognitions of Indian auto component industry. These were instituted in year 1966. Since then, its process has witnessed a number of improvements apart from inclusion of new categories based on industry needs. Presently these awards are given to ACMA members for their outstanding achievements in the field of Export, Technology, Quality & Productivity and Manufacturing Excellence. Additionally, two new categories of Manufacturing Excellence for MSMEs and Excellence in Human Resource have been introduced from year 2015.

This Summit provided a platform to the winners of ACMA Awards 2013-14 to share their achievements with the industry. Following ACMA Awards Gold Trophy winners shared their success stories in the form of a presentation:

- Bosch Ltd. Manufacturing Excellence
- Hi-Tech Gears Ltd. Export (Large)
- Litens Automotive (India) Pvt. Ltd. Technology (Small)
- Nipman Fastener Industries Pvt. Ltd. Quality & Productivity (Large)
- Sellowrap Industries Pvt. Ltd. Quality & Productivity (Small)
- Wheels India Ltd. Technology (Large)

These presentations also motivated the audience to follow and imbibe good practices in their respective organizations.

Presentation by ACMA Award Gold Trophy Winners - 2014



Bosch Ltd.



Hi-Tech Gears Ltd.



First ACT Summit



Litens Automotive (India) Pvt. Ltd.



Nipman Fastener Industries Pvt. Ltd.



Sellowrap Industries Pvt. Ltd.



Wheels India Ltd.

Notice to invite applications for the year 2014-15 has been released by ACMA. Last date to apply for ACMA Awards 2014-15 is 21st May, 2015. Interested companies can visit: www.acma.in

Award Ceremony & Valedictory Session

ACT has been driving various cluster programs since year 2001 and it has helped transform a number of manufacturing units. This is the result of selfless efforts of a number of individuals and organizations who have laid down a path for the others to follow. ACT recognized the path breaking contributions of companies and individuals separately. 62 individuals and 20 companies were recognized as ACT heroes. Chairman ACT presented medals to each one of them.





ACT Hero – Individuals

Sr. No.	ACT Hero	Company / Plant Name	Sr. No.	ACT Hero	Company / Plant Name
1	Dilip Kumar	Abilities India Pistons & Rings Ltd.	32	Ashok Gautam	Neolite ZKW Lightings Pvt. Ltd.
2	Punit Sharma	Abilities India Pistons & Rings Ltd.	33	Parveen Ahlawat	Neolite Zkw Lightings Pvt. Ltd.
3	Satish Rana	Abilities India Pistons & Rings Ltd.	34	Pravin Yadav	Neolite ZKW Lightings Pvt. Ltd.
4	Shailesh Gohil	Delux Bearings Ltd.	35	Ravinder Jangra	Neolite ZKWLightings Pvt. Ltd.
5	Santosh Hulgutte	Delux Bearings Ltd.	36	Sunil Dahiya	Neolite ZKW Lightings Pvt. Ltd.
6	Sachin Patil	Delux Bearings Ltd.	37	Yashpal Singh	Nipman Fastener Industries Pvt. Ltd.
7	Santosh Renose	Delux Bearings Ltd.	38	Keshav Paithankar	Pinnacle Industries Ltd.
8	P. Balaji	IM Gears Pvt. Ltd.	39	Laxman Thakur	Pinnacle Industries Ltd.
9	K. Ganesan	IM Gears Pvt. Ltd.	40	S.V. Sudhakar	Sandhar Automotives
10	Ganesh Prabhu	IM Gears Pvt. Ltd.	41	Vijay Shankar	Sellowrap Industries Pvt. Ltd.
11	R. Ravikumar	IM Gears Pvt. Ltd.	42	Kamlesh Macwan	Vikrant Auto Suspensions
12	Tamilalagan.A	IM Gears Pvt. Ltd.	43	Harmesh Patel	Vikrant Auto Suspensions
13	R. Venkatesan	IM Gears Pvt. Ltd.	44	Dhanraj Kumavat	Vikrant Auto Suspensions
14	T. Nagappan	IM Gears Pvt. Ltd.	45	Vanraj Labana	Vikrant Auto Suspensions
15	Sanjay Jaiswal	Investment & Precision Castings Ltd.	46	Benjamin Joseph A	Wabco India Ltd.
16	A. Rajamanickam	IP Rings Ltd.	47	G. Natarajan	Wabco India Ltd.
17	K. B. Balachandar	IP Rings Ltd.	48	V. Paradesi Asari	Western Thomson (India) Limited
18	Jaywant Kharade	Menon And Menon Limited	49	R. Balachandran	Western Thomson (India) Limited
19	Amar P. Gurav	Menon And Menon Limited	50	K. Balaji	Wheels India Limited
20	Mukund A. Diwase	Menon And Menon Limited	51	K. Manickaraja	Wheels India Limited
21	Sunil R Kawade	Menon And Menon Limited	52	M. Shaoul Hamid	Wheels India Limited
22	Vivek Haridas	Menon And Menon Limited	53	V. Thennavan	Wheels India Limited
23	Narayan S. Tonape	Menon And Menon Limited	54	R. Sindhuja	Wheels India Limited
24	S. Preethi	MGM Springs Ltd.	55	Rajendran S	Wheels India Limited
25	Jitendra Patel	Moflex Suspensions Pvt. Ltd.	56	Balaji Garad	Metalman Auto Pvt. Ltd.
26	Raman Mediratta	Moflex Suspensions Pvt. Ltd.	57	Umesh Potdar	Metalman Auto Pvt. Ltd.
27	Shailesh Panchal	Moflex Suspensions Pvt. Ltd.	58	A.A. Gutte	Metalman Auto Pvt. Ltd.
28	Vipul Mahida	Moflex Suspensions Pvt. Ltd.	59	Prasenjit Survade	Metalman Auto Pvt. Ltd.
29	Dashrath	Munjal Auto Industries Ltd.	60	Ravi Kulkarni	Metalman Auto Pvt. Ltd.
30	Dilip V. Vahalkar	Mutha Founders Pvt. Ltd.	61	S.P. Raut	Metalman Auto Pvt. Ltd.
31	Anil Gupta	Neolite ZKW Lightings Pvt. Ltd.	62	R.B. Rathod	Metalman Auto Pvt. Ltd.





ACT Hero - Companies

Sr. No.	Company / Plant Name	ACT Cluster Program Completed / Running
1	Delux Bearings Ltd., Plant 1, Wadhwan, Gujarat	ACT Foundation Cluster VII
2	Devilog Systems (India), Bangalore	ACT SME Cluster Program
3	Fairfield Atlas Ltd.	ACT Foundation / Advance / Engg. I
4	IM Gears Pvt. Ltd.	1st Engineering Excellence Cluster
5	IP Rings Ltd.	Foundation & Advance Cluster
6	Menon & Menon Ltd.	ACT Engineering I
7	Metalman Auto Pvt Ltd.	Foundation
8	Moflex Suspensions Pvt. Ltd., Gujarat	ACT Advance Cluster 4SW
9	Munjal Auto Industries Ltd., Haridwar	ACT Advance 4
10	Mutha Founders Pvt. Ltd., Satara.	ACT Foundation Cluster 8 SW
11	NASH Industries (I) Pvt Ltd, Bangalore	ACT Foundation Cluster 8 (SW)
12	Neolite ZKW Lightings Pvt. Ltd., Bahadurgarh	ACT Advance Cluster 4 N
13	Nipman Fastener Industries Pvt Ltd, Haridwar	ACT Advance Cluster 4 N
14	Autocomp Corporation Panse Pvt. Ltd.	Foundation
15	Pinnacle Industries Limited, Pithampur	Advance Cluster
16	Sanjeev Auto Parts Manufactures Pvt. Ltd.	Foundation & Advance Cluster
17	VE Commercial Vehicles Ltd.	Foundation & Advance Cluster
18	Vikrant Auto Suspensions, Halol	ACT Advance Cluster 4SW
19	Wabco India Ltd., Chennai	ACT Engineering Excellence Cluster I
20	Wheels India Ltd., Padi	ACT Engineering Excellence Cluster II

Felicitation of ACT Past Chairmen:

All the achievements and laurels received by ACT are the results of its visionary leaders who have selflessly contributed towards development of Indian Auto Component Industry. A dream visualised by them many years ago has formed shape now. At the summit ACT proudly felicitated the ACT's Past Chairmen. The ACT cluster founders were also felicitated at the summit for their contribution to the cluster movement.



L to R: Mr. Abhay Firodia felicitating Mr. Dinesh Munot, Past Chairman (Year 2003 - 2004)



Felicitation of ACT Past Chairmen:



L to R : Mr. Abhay Firodia felicitating Mr. Jayant Davar, Past Chairman (Year 2006 - 2008)



L to R : Mr. Abhay Firodia felicitating Mr. Deep Kapuria, Past Chairman (Year 2010 - 2012)

Felicitation of ACT Cluster Founders:



L to R : Mr. Abhay Firodia felicitating Mr. C. Narasimhan, Cluster Founder



L to R : Mr. Abhay Firodia felicitating Dr. Sarita Nagpal, Cluster Founder

Awards to winners of ACT Case Study Competition - 2015

Gold, Silver and Bronze awards were given to the winners of the case study competitions under four categories -Quality, Environment, TEI & Innovation.

Stream 2



Quality - Customer's Delight Name of the winner Company - Gabriel India Limited, Nashik Project Name - Eliminate customer complaint & In-house rejection for lug missing of outer tube



Environment – Nature's Delight Name of the Company – Wheels India Limited, PADI_FAW Project Name – Burr free Machining shop floor



Stream 3



Total Employee Involvement - TEI - Employees Delight Name of the Company - Gabriel India Limited, Pune Case Study Number – T013 **Project Name** – To increase Employee engagement through participative management

Stream 4

Innovation - Business Delight Name of the Company – Delux Bearings Ltd, Plant-l_Wadhawan **Project Name** – Productivity Improve through Low Cost Automation system for Roller Filling In Cage

We are sharing with you the case studies of these winner companies in the same issue of "ACT Now".

Success stories sharing by ACT Cluster Members

ACMA Centre for Technology is pioneer in implementing cluster programs in Indian auto component industry. ACT has always focused on designing programs which not only train new people but also help them become trainers in their subjects. The various cluster programs of ACT have been designed very meticulously, keeping in mind the varied requirements. These include; ACT MSME Cluster, Foundation Cluster, Advance Cluster, Engineering Excellence Cluster & New Product Development Cluster.

ACT clusters are considered as a proven approach to implement best manufacturing practices and substantial improvements have been achieved by many companies by adopting this methodology. Some of these companies shared their achievement journey during First ACT Summit which were an eye opener for everyone. These companies include:

- ACT Advance Cluster by Neolite ZKW Lightings Pvt. Ltd.
- ACT Foundation Cluster by Fairfield Atlas Ltd.
- ACT Engineering Cluster by IM Gears Pvt. Ltd.
- ACT SME Cluster by Devilog System (India)



Neolite ZKW Lightings Pvt. Ltd.



IM Gears Pvt. Ltd.







Fairfield Atlas Ltd.

Devilog System (India)





ACMA Team with Mr. Abhay Firodia, Chairman Force Motors.

(L - R) Mr. Vinnie Mehta; Mr. Rajan Ramanathan; Mr. Jitender Rana; Ms. D. Umadevi; Mr. Mahesh Gupta; Mr. Sunil Mutha; Mr. Aniket Khasnis; Mr. Uday Harite; Mr. Atul Gupta; Mr. Dinesh Vedpathak; Mr. K R Bhoopalan; Ms. Sapana Baravkar; Mr. Abhay Firodia; Mr. C Narasimhan; Mr. Srivats Ram; Ms. Sakshi Karkamkar; Mr. V K Sharma; Mr. K Chandrasekhar; Mr. S B Dokey; Mr. G Ananthakrishnan; Mr. Arun Bage; Ms. Nilu Singh; Mr. L. Murughendra; Mr. Binny Tomy.

The 1st ACT summit was a resounding success.



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Conveyorize Assembly Line

Over head Conveyor for Material Handling Over head Conveyor for Finished good

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IIPM TPM Excellence award winner Company
BAIAJ TPM award & Bajaj TPM Excellence award winer Company
Received Customer Quality Bronze, Silver, Gold Award
Received ACMA Gold award for Quality & Productivity
Received ACMA Silver award for Menufacturing Excellence

ISO 14001 & CHSAS 16001

TPM-Lighting LUMAX, Lighting Life

Case Studies of Winner Companies

ACT Case Study Competition

held on 16th Feb, 2015, Pune

Stream 1- Quality (Customer Delight)

Gabriel India Ltd.

Nasik, Maharashtra

- 1.1 **Project Name:** Eliminate customer complaint & In-house rejection for lug missing of outer tube
- **Project Start Date** 15.04.2013 1.2 **Project End Date** 30.08.2013 (Projects Done between Jan 2013 to Dec 2014)
- 2. **ACT Competitions Streams:**
- Stream 1 Quality (Customer Delight)

3. Synopsis of Project

Gabriel India Limited has strong presence as a producer and supplier of high quality Ride Control Products for the Indian Automotive Industry participating in all segments. Facility at Nasik manufactures Shock Absorbers and Front Forks for two-wheelers (Scooters & Motor Cycles).

The company had set objective FY 2013 -14 as Customer Delight for all customers By Eliminating Customer Complaint, In house Rejection & rework. This Case Study completed for In-house rejection of All 2W Model For Lug missing In house Rejection.

Hence management decided to sort out this problem as project basis through Quality circle Methodology. Quality circle used involvement of bottom level (operators) with group of 4-5 people by choosing one leader through them who lead the team working on chosen project.

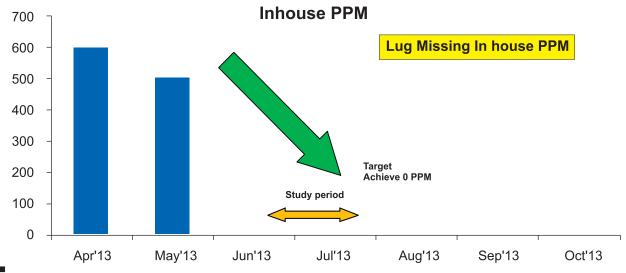
Theme of Project: Eliminate In-house Rejection For all 2W Shox Absorber due to lug missing

The objective of project is to eliminate in-house rejection for lug missing of outer tube of all 2 Wheeler rear shock absorbers. It focused on eliminate in house rejection. It moves towards zero defects & zero effect streaming. With this tangible benefits, management is also trying to achieve intangible benefits in terms POCDSM, brand image recovery by made zero defect.

From safety point of view lug missing had very high severity as it reflects to accidental case. There should be requirement of two no's lug with specified weld strength. But missing of single lug results in improper fitting of adjuster & other sub assy. Which creates breakdown during vehicle run.

The Quality circle uses various quality tools like Brainstorming, Cause & Effect Diagram, Check sheet, Why-Why analysis for problem solving. After finding out of root cause different possible actions generated through idea generation & implementation phenomena. Validating various actions finally decided for implementation of Poka yoke @ lug welding machine by providing vacuum switch to upper side electrode & interlock with start cycle of machine.

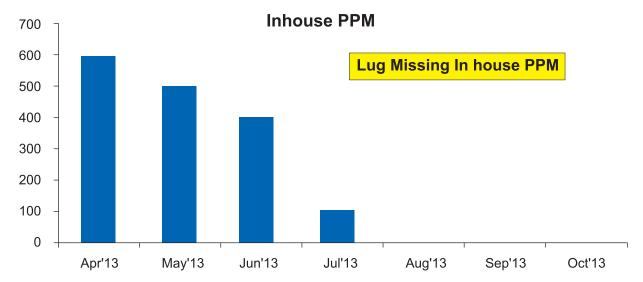
Hence through this project we study entire



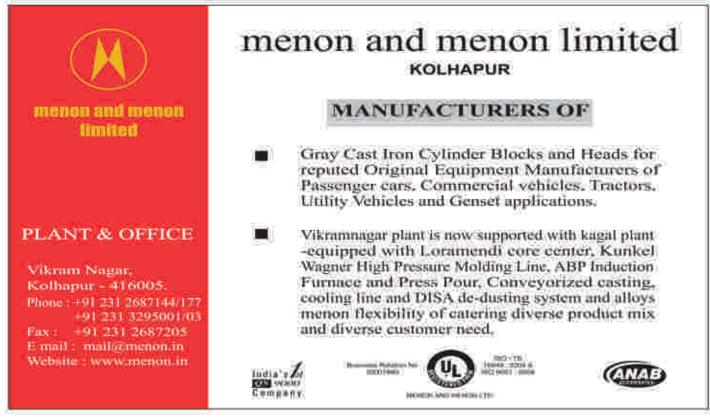
manufacturing process, find out all possible causes & implemented valid actions to achieve desired project objective.

After implementing of poka yoke we got

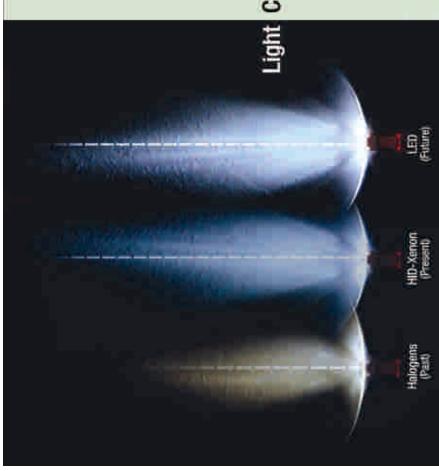
significant results in terms of Zero in house rejection, reduce operator fatigue by improving moral & reduce cost.



- 4. Uniqueness of this project?
- Proven the Concept of Defect Free Machine i.e. Machine cannot produce a defective component.
- This concept Used across Gabriel While Purchasing New Lug Welding Machine.
- Also Achieve Results for Zero Customer complaint with Zero Internal Rejection & Rework.
- Benefits of the Project: Tangible (Quantitative)
 - i) Financial Benefits 2,52,000 INR/Annum
- 5. 2 **Benefits of the Project:** Intangible (Qualitative) (Space, Time, Rejection Reduction etc)
 - ii) Improve moral of operators
 - iii) Reduce cycle time
 - iv) Improve brand image









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Stream 2- Environment (Nature Delight)

Wheels India Limited

Padi, Chennai

- 1.1 Project Name: Burr free Machining shop floor.
- 1.2 Project Start Date 08.11.2014 Project End Date - 27.01.2015 (Projects Done between Jan 2013 to Dec 2014)
- 2. ACT Competitions Streams:
- Stream 2- Environment (Nature Delight)
- Synopsis of Project:- We have observed that 3. the machining cell has swarf material falling and coolant all over the floor during transferring the machined wheels. This problem was creating trouble in 5s and EMS audits. Hence we decided to improve the condition by implementing kaizens within cell to avoid swarf falling out of the machine.
- 3.1 Project linkage to company business: Shop floor improvement activities are the basic need expected by our company.
- 3.2 **Project objective:** To improve the machining cell cleanliness by making changes in the part handling process.
- 3.3 Past Trend of the problem: Burr found all over the floor
- 3.4 Analysis to find root cause:

We observed the contamination of floor due to burr on machining cell and listed the reasons collectively. We concentrated on the major contributors and made corrective action for them.

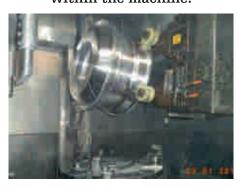
Burr carried from machine along with the wheel.



Burr collected in separate swarf bins.



As shown below, wheel is tilted within the machine.



Idea: -

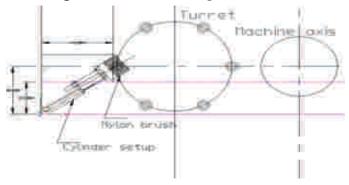
- 1 To tilt the wheel within the CNC machine to get rid of the burr.
- To place a sensor in the conveyor to sense the presence of the swarf bin
- To avoid manual intervention in cleaning the tool by automating the process.
- To provide external conveyors covered with guard for avoiding coolant and swarf spillage.

As shown below, Conveyor sensor provided





As shown below, brush has been designed to automatically clean the tool.



As shown below, external conveyors have been provided.



Validation of Root Cause & Action:

Operation cell	Trial no.	What to trial	How	When
Machining cell	1	Trial in turning operation	By tilting the wheel within the machine	21-12-2014
Machining cell 2 Trial in turning op		Trial in turning operation	By automating the tool cleaning.	20-01-2015

Validated the process for 20 cycles and found the results satisfactory.

3.6 Results to compare Before & After Status:



Visibly found changes in the shop floor.

After QC



Uniqueness of this project:-

Machining cell	of providing conorg		To be horizontally deployed in cell 1 activities in cell 2 and scope of increasing burr free area.
----------------	---------------------	--	--

5.1 **Benefits of the Project:** Tangible (Quantitative)

i) Approximately 75 sq. m of area was cleared of chips falling on floor.

5.2 Benefits of the Project: Intangible (Qualitative)

(Space, Time, Rejection Reduction etc)

- ii) Improvement in shop floor visibility.
- iii) Customer delight during visits due to cleanliness.



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Stream 3- TEI- Total Employee Involvement (Employee Delight)

Gabriel India Ltd.

Pune, Maharashtra

1.1 Project Name: To increase employee engagement through participative management

1.2 **Project Start Date:** 02.01.2014 Project End Date: 31.12.2014

(Projects Done between Jan 2013 to Dec 2014)

2. **ACT Competitions Streams:**

Stream 3- TEI- Total Employee Involvement (Employee Delight)

Synopsis of Project

3.1 Project linkage to company business:

MD focus Area :- Qualitative :- Organizational Culture: Winning & Collective Pride

Quantitative:-GPTW Score 80

3.2 Project objective:

- To increase employees engagement in Quality Circle, Kaizen & Suggestion
- To improve working environment through 2) Safety, 5S & Waste Elimination drives
- To develop competent workforce through 3) skill building.

Past Trend: 3.3

- 1) Quality Circles 7 Nos
- Suggestion Scheme 40% participation 2)
- 3) 5S Score 60
- 4) No. of Accidents 2
- 5) Skill Levels in L3 32%

In the year 2013 - HR performance indicators not achieved as per set targets. The Employee Involvement was not seen at its fullest capacity. Inter-cell feedback mechanism was not present.



3.4 Analysis to find root cause:

Validation of Root Cause & Action: 3.5

Theme - Total Employee Involvement through Participative Management

Approach towards Theme

Step -01: Developing Cell wise Industries within Industry (Mini Industry)

Step -02: Develop competent workforce through skill building (Training)

Step -03: Increase employees involvement in Quality Circle, Kaizens & Suggestion

Step-04: Improve working environment through Safety, 5S & Waste Elimination drives

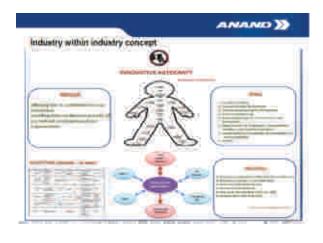
Step -05: Actions

- QC Formation
- Skill Up gradation Training
- Suggestion Scheme
- Industrial Visits
- Safety & 5'S Improvements

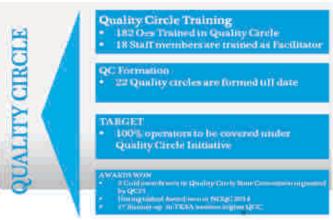
Step-06: Case Study (Industry within Industry)

3.6 Results to compare Before & After Status:

- 1) Quality Circles increased from 7 to 22 Nos
- Participation of employees in Suggestion Scheme increased from 40% to 60%
- 3) 5S Score increased from 60 to 75%
- No. of Accidents reduced from 2 to 0
- Skill Levels in L3 increased from 32% to 74%









Uniqueness of this project?

Mini Industry Concept for Total Employee Involvement

Creative Skills Training for Idea Generation & Kaizens implementation

Weekly Feedback meeting on shop floor with all the operating engineers

- 5.1 **Benefits of the Project:** Tangible (Quantitative)
 - i) Financial Benefits 28,08,052 INR/Annum







5. 2 Benefits of the Project: Intangible (Qualitative)

(Space, Time, Rejection Reduction etc)

- ii) Employee Morale Increased
- iii) Highly Motivated Employees
- Skilled People iv)
- Focused People v)
- Recognition from customers





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->05

Litens Automotive (India) Private Limited



Company Information:

Litens automotive (India) Private Ltd is a full subsidiary of Litens Automotive partnership Canada. India plant started in 2009 as a mission of serving India & South East Asia customers with design, development and manufacturing services of critical engine Accessory & Timing drive parts. Started the manufacturing operation with Fiat Timing belt tensioners in 2009, today the product range has been extended to Accessory drive tensioners, Timing drive tensioners and smart sprockets, covering Honda, VW, Fiat and TATA.

Litens Group is the innovator of Engine power transmission components like Automatic tensioners, Alternator decoupler, Torqfiltr, Switchable water pumps and electronic tensioner. Litens continued to provide the High quality, cost effective, Durable and reliable components to OEMs across the globe. Litens products are designed based on the lean approach to achieve lower working tension, higher vehicle mileage, Lesser NVH and lesser CO2 emission.

Product Library:



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Stream 4- Innovation (Stakeholders Delight)

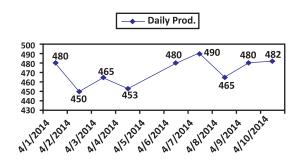
Delux Bearings Ltd. (Plant-1)

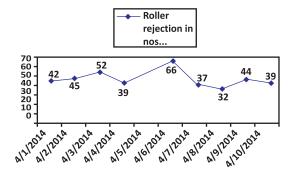
Wadhwan, Gujarat

- 1.1 Project Name: Productivity Improve through Low Cost Automation system for Roller Filling In Cage.
- 1.2 Project Start Date -10.05.2014 Project End Date -30.05.2014 (Projects Done between Jan 2013 to Dec 2014)
- **ACT Competitions Streams:** 2.
- Stream 4- Innovation (Stakeholders Delight)
- Synopsis of Project: We were facing problems 3. of Manually Roller filling activity from long time and due to this Our Productivity Level is Down. Due to this Problem we were unable to meet

additional customer Demand. During Management review meeting in April-14 it was decided to work on Low cost automation to meet future customer demand.

- 3.1 Project linkage to company business: Company objective for current year- capacity enhancement through innovations
- 3.2 Project objective: To innovate LCA to eliminate Roller OD Dent Marks Rejection, during Roller Filling In Cage and improve Productivity
- Past Trend of the problem: 3.3





Roller Rejection Oty -396 nos. X Rs 0.55 = Rs 217.80 X Rs 2500/- (10 days Visual Inspection cost) = Rs 2717.80. = Rs 271.80 per day loss

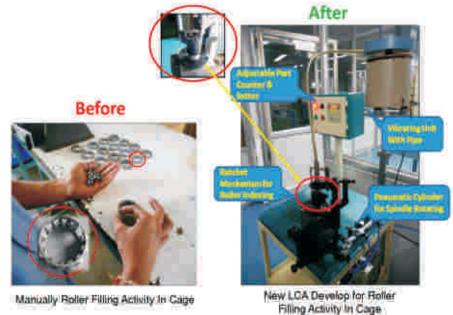
Analysis to find root cause: 3.4

We have Brainstormed to find out reason by using cause and effect diagram and we found Root Cause

- Manual Roller Filling in cage 1)
- 2) Roller Damages due to Manual Roller Filling
- 3) Depending on Operator Skill

Innovative idea: - To Avoid Cause 1), 2) & 3) - Make a Low Cost Automation by Geneva Mechanism or Ratchet Mechanism With roller feeding system.

As shown below, we can see that now Ratchet mechanism working Smoothly in cage roller filling operation.

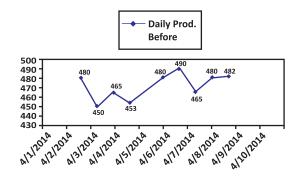


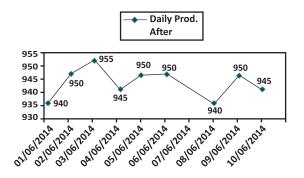


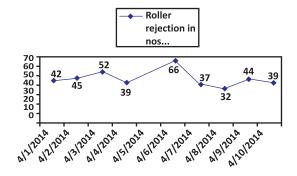
3.5 Validation of Root Cause & Action:

We validated root cause of Roller Rejections & Cage Roller Filling Manually which is now eliminated by Low Cost Automation.

3.6 Results to compare Before & After Status:







After This Project - Zero Roller Rejection

We have taken action in May-14 & From Jun-14 onwards Cage manually Filling & Roller Rejection problem eliminated.

4. Uniqueness of this project:-

Our Project Uniqueness is Low Cost Automation, No use of Highly Expensive parts Like PLC, HMI, Servo Motor Etc.

5.1 **Benefits of the Project:** Tangible (Quantitative)

- Productivity improved from 490nos/ per shift to 950 nos/shift
- ii) 50 % Operator time Utilized for other Work
- iii) Cost Saving due to Roller Filling
 - = Rs. 1,11,960/-per annum.
- iv) Cost Saving on visual inspection
 - = Rs 84,258/- Per annum.

Total savings = Rs 1,96,218/-

5. 2 **Benefits of the Project:** Intangible (Qualitative)

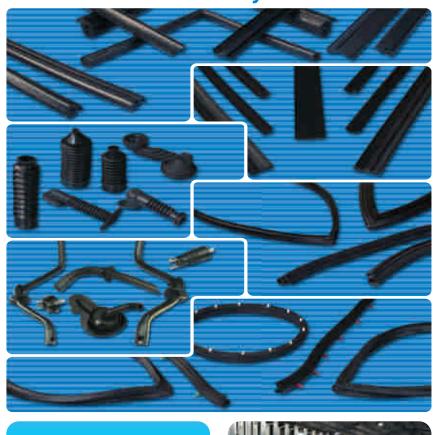
- Customers' additional demand met without additional investment
- vii) Customer delight due to quality improvement
- viii) Easy Operating System with no extra Efforts.
- Low Operator Stress. ix)
- ROI (Return of Investment) Covered Within \mathbf{x}) Two month.





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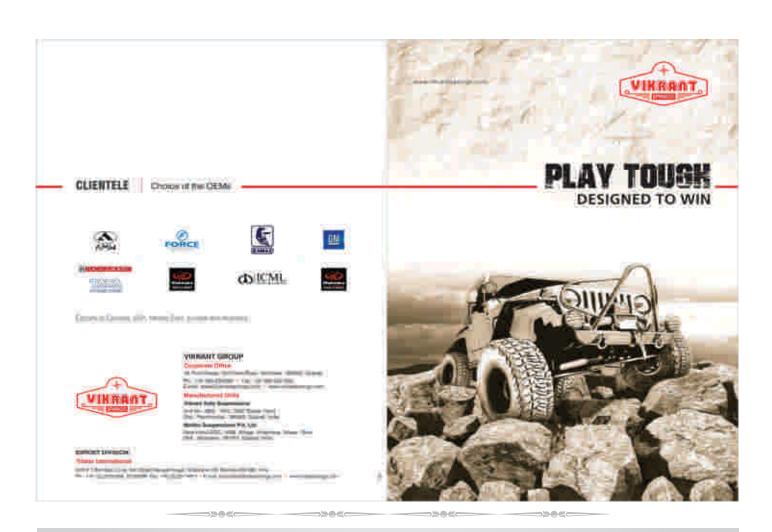














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Energy Management

Energy management is the practice of using energy more efficiently by eliminating energy wastage in an organisation's operations. Most businesses think of energy as a cost that is out of their control as with many other elements of the organisation. The aim of energy management is to achieve organisational objectives at minimum energy consumption and cost, but it is worth emphasizing that the operative word is "management".

Eliminating wastage and using energy resources efficiently is just good management practice. Successful energy management incorporates leadership (commitment from the top of the organisation), measuring energy use and promoting the success. Energy management will save the organisation money and reduce its impact on the environment at the same time. Energy Management is all about:

- Make the best use of our present and future energy sources in order to avoid crises, both economic and environmental.
- It is a professional occupation that has impact on the economy, people's security and comfort, their jobs, and the environment.
- It is not just concerned with saving energy, but also with increasing productivity, improving standards of living and saving money.

Energy management can be described by five distinctive steps - each containing a number of smaller steps. The five steps are reiterated during the lifetime of the system:

(i) Energy Policy:

The energy policy defines the overall guidelines for the efforts to achieve greater energy efficiency. It is established and maintained by the top management of the company.

(ii) Planning:

The company reviews all energy aspects to form an overview of the significant energy consumption i.e. the machinery, equipment and activities which account for the highest energy consumption or which offer the most considerable potential for energy savings. The review forms the basis for determining the order of priority of the energy saving efforts. Concrete energy targets are set complying with the overall energy policy. To achieve the targets the company elaborates action plans.

(iii) Implementation and Operation:

The company involves the employees in the implementation of the objectives and makes sure better use of energy becomes a part of their daily



V.K. Sharma Principal Counselor, ACT

routines. This includes introducing procedures for energy conscious purchasing, operation and maintenance of equipment with significant energy consumption, energy efficient design activities etc.

(iv) Checking and Corrective Actions:

The company monitors and measures the significant energy consumption and all activities with a significant impact on energy aspects. Corrective and preventive actions are taken in case of nonconformance e.g. when the energy targets have not been achieved within the specified time limit.

(v) Management Review:

The top management periodically evaluates how the implementation of plan, objectives and operational control is proceeding to ensure its continuing suitability. The management review must address the possible need for changes of the elements of the energy management system, in the light of the commitment to continual improvement.

The most common problems in industry:

Electrical Power is used in all Industries either as motive power or for generating heat through furnaces. The main factors contributing to energy

- Low power factor.
- Penalties associated with maximum demand.
- Needless use of overrated motors and equipment for specific tasks.
- Compressor leakage.
- Incorrect choice of main transformers.
- Leakage of current at the LT control panel, cable and capacitors.
- Selection of cooling towers.

Heat energy is used either directly by burning any one of several fuels like oil, coal, wood, gas etc. in a furnace or indirectly through the use of steam generated by boilers (process heat). The major



contributory factors in this area are :-

- Carpet losses/losses connected with storage of fuel.
- Improper combustion of fuel.
- Load factor.
- Waterside & fireside deposits (low Heat transfer).
- Low efficiency of steam delivery systems (Improper insulation of steam pipe, optimum pipe size etc.).
- Condensate Recovery.
- Uncontrolled blowdown.
- Oversized equipment

The above energy losses can be avoided with effective Energy Management. The main objective of the Energy Management is to optimize energy consumption to increase profits. Energy management involves bringing all pertinent energy data from all over the organisation into a central location and providing this information to users to make informed energy decisions.

Energy management and optimization includes the ability to forecast electricity, steam and fuel consumption; maximize cost efficiency by load scheduling and optimizing electricity generation; manage electricity purchase and sales; monitor and control peak loads, energy balance and efficiency; and support decision making with simulation and "whatif" analysis. Together, these advanced tools support the energy business from both operational and economic perspectives, helping organisations increase efficiencies and cut costs.

The first aim of energy management should be to gain control of consumption and costs by assessing current use, and by taking steps to incorporate energy efficiency into the corporate culture. This often involves:

- Identifying, and quantifying the organisation's major users of energy
- Reviewing energy purchasing strategies-the fuel and billing rate structure choices-to make sure that the most appropriate energy sources are being exploited and that they are being bought at the right prices.
- Assessing operating practices- heating plant, lighting and ventilation control strategies to ensure that existing plant and equipment is being operated at maximum efficiency.

Energy management in industry:

All industrial companies can benefit from exercising good energy management. Savings of at least 10% and up to 40 % can be realized by implementing some useful energy management techniques. The key to achieving savings is to take a strategic approach to managing energy use and giving importance to energy management techniques.

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ACT Engineering Excellence Cluster Program

A Success Story

The Engineering Excellence Cluster Program is an important part of the Indian Production System which suits the Indian culture. ACT launched the 1st ACT Engineering Cluster Programme in July, 2011 which received tremendous response from the members. Total seven companies had joined this cluster program.

In order to meet the enthusiasm and the requirement of ACMA members and to achieve the next level of excellence in the auto component Industries, ACT launched 2nd Engineering Excellence Cluster Program in December 2012 with 4 companies. This cluster primarily focused on Engineering aspects of manufacturing set-up such as design of Lean machines and accessories, Tooling's, Gauges, Jigs & Fixtures and Assembly work stations and Material Handling and logistics and Making the shop-floor environment friendly.

The Engineering Excellence Cluster program is one step forward towards the Lean Journey of a manufacturing enterprise. This cluster proposes to revisit and re-look into the Conventional and established work practices in the following areas:

- Total Lean Manufacturing (includes Flow Manufacturing / Lean Machines & Accessories / Lean Processes, Burr Engineering, Quality Proving)
- 2) Green Manufacturing (Includes Waste Management & Control, Revisiting and Optimizing all types Resources, Carbon Footprint)
- Tool Engineering (Includes Tool Mapping/Lean Tooling/Tooling Standards)
- Parts Handling and logistics. (Includes Inventory less Production)

The objectives of this Cluster Program were: -

- People competency building Impacts Employee Satisfaction.
- Continuously Improve PQC parameters -Impacts Customer Satisfaction.
- Sustainable Total Manufacturing Excellence - Impacts Excellence in Production System.
- Going Global Supports becoming a part of the Global Supply Chain.

Following were the Deliverables:

- Customer Satisfaction

- On Time Delivery
- Consistency in Quality



Mr. C. Narasimhan, Chief Mentor ACT, addressing the gathering at Closing of 2nd ACT Engineering Excellence Cluster: 17th Feb, 2015, Pune

- Employees

- Employee Satisfaction
- Safe Workplace and Environment
- Competency Building

- Company Benefits

- **Cost Reduction**
- Capacity Enhancement
- Productivity Improvement

The 2nd ACT Engineering cluster concluded on 17th February, 2015 at Pune which had following companies as its member:

- Bharat Gears Ltd., Faridabad
- Menon & Menon Ltd., Kolhapur
- Metalman Auto Pvt. Ltd., Aurangabad
- Wheels India Ltd., Padi

ACT Engineering cluster is fortunate to have Mr. C. Narasimhan as its Mentor and Mr. Dinesh Vedpathak, Head Cluster Program (ACT) as its counselor.



Mr. Dinesh Vedpathak, Head Cluster Program ACT



This was a two year cluster and all the member companies achieved tremendous results during this improvement journey. The overall value for money is as given below:

In INR Lakh

S. No.	Company Name	Model Line Saving	Potential saving from Horizontal Deployment	Total
1	Bharat Gears Ltd.	337.07	163.34	500.41
2	Menon & Menon Ltd.	46.59	44.37	90.96
3	Metlman Auto Pvt Ltd *	21.70	65.03	86.73
4	Wheels India Ltd.	194.0	To be worked out	194.00
	Total In Rs. Lakhs			872.1

All the member companies have been awarded with certificate of cluster completion at the closing ceremony organized on 17th Feb, 2015 Mr. Srivats Ram, Chairman ACT and Mr. C. Narasimhan, Chief Mentor ACT presented the certificates to the participating companies:



Bharat Gears Ltd., Faridabad



Metalman Auto Pvt. Ltd, Aurangabad



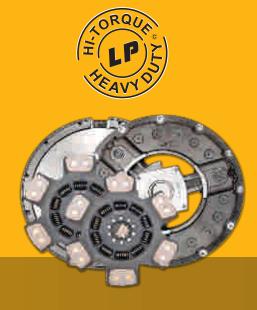
Menon & Menon Ltd., Kolhapur



Wheels India Ltd., Padi

The 3rd ACT Engineering Excellence Cluster is scheduled to be launched in June/July 2015. Interested members can get in touch with ACT secretariat to get themselves registered for this improvement journey.







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- > Power steering gears for SUV and off road vehicles.
- Vane pumps.
- Oil reservoirs.
- Steering columns.
- Drop arms.
- Intermediate shafts.
- Bevel gear boxes.
- Worm and roller mechanical Steering systems for Tractor and Light Commercial Vehicle and all accessories for the same.
- Power Rack and Pinion steering system for Passenger Car.
- Mechanical Rack and Pinion Steering System for One Toner Passenger and Goods Carrier.

ZF Steering Gear (India) Ltd.

Village Vadu BK, Gat No. 1242/44, Tal. Shirur, Dist. Pune 412 216

Phone: 02137 305 100 Fax: 02137 305302 Web: zfindia.com, Email: enquiry@zfindia.com

ACT News

ACT Professional Certification Course on Productivity Improvement at New Delhi January 2015 - March 2015

ACMA Centre for Technology (ACT) has successfully concluded Professional Certification Course on "Productivity Improvement" at ACMA office New Delhi on 27th March, 2015. This was fourth batch and the course was spread across three months, starting on 7th January 2015. Ten participants from six companies were handed over certificate of completion by Mr. Sunil Arora, Dy. Chairman, ACMA (NR) and MD, Abilities India Piston & Rings Ltd.

Participant companies:

- · Advance Forgings Pvt. Ltd.
- Bony Polymers (P) Ltd.
- Jay Bharat Maruti Ltd.
- Makino Auto Industries Pvt. Ltd.
- Polyplastics Ind. (I) Pvt. Ltd.
- Setco Automotive Ltd.

The faculty for the course was Mr. V.K. Sharma, Principal Counselor, ACT. Mr. V.K. Sharma, is a seasoned professional with an experience of over 30 years in the Auto-motive industry. He is presently leading ACT activities for North India and is mentoring four different cluster programs.

All the participants have taken up live projects in their companies. On 27th March, 2015, presentations were delivered by participants to share the benefits achieved by implementation of projects and also by this PCC Program.

Pre & Post tests were devised to gauge the participant's ability and level of understanding. Their results were:

Pre Test Results (On first day of the course)

Min. Score - 7% and Max. Score - 71%

Post Test Results (On final day of the course)

Min. Score – 81% and Max. Score – 94%

Presently, Six such Certification Courses are run by ACT wherein the motive is to build in-house trainers for the participating companies. These include Professional Certification Course on the following topics:

- Lean Hydraulic systems (Breakdown free systems)
- Lean Electrical Systems (Breakdown free & Without Air conditioning systems)
- Lean Coolant & Lubrication Systems (Contamination free systems)
- Quality Management (Move towards Zero defect Quality culture)





(L-R) Mr. V.K. Sharma, Principal Counselor ACT & Faculty of this course, Mr. Sunil Arora, Dy. Chairman (NR), ACMA & Managing Director, Abilities India Piston & Rings Ltd., handing over certificate to one of the successful participants.

- Productivity Improvement through Flow Mfg. & Low cost automation (Multifold productivity improvement and Line Balancing)
- Inventory Management (Releasing blocked Capital)

Talking on the positive outcome, Mr. Sunil Arora, Deputy Chairman, Northern Region, ACMA, said, "ACT is doing a great job for the Auto Components industry by nurturing the talent within employees of the member companies. This is improving the company's quality and productivity levels and is bringing them to global standards. ACMA in real terms is the torch bearer for the industry."

The overall feedback received from the participants is excellent.





Launch of ACT MSME Cluster for Bangalore 14th March, 2015 at Bangalore

The various cluster programs of ACMA Centre for Technology (ACT) have been designed keeping in mind the varied needs of Indian auto component industry. ACT Foundation Cluster, Advance Cluster, Engineering Cluster and NPD Cluster cater to the needs of large companies while ACT SME Clusters are tailor made for addressing the requirements of smaller manufacturing units. Many auto component manufacturers in India, specially the tier-2 and tier-3 suppliers, fall in the category of micro, small & medium enterprises. In order to improve the overall quality of end product (OE) it is imperative to improve the quality of child parts supplied by these MSME units. While there is an urgent need to improve the manufacturing practices of these units, most of the improvement programs available today are relatively costly for units of this size.

In its endeavor to help upgrade the auto component supply chain, ACMA Centre for Technology has devised a cluster program, i.e ACT MSME Lean Cluster, which is aimed at implementing basic lean manufacturing practices at the MSME units. Of late, ACT has successfully launched this cluster Program for Pantnagar, Delhi NCR, Haridwar, Pune, Ludhiana, Kolhapur and Aurangabad. This cluster has received a tremendous response from the auto component industry since its inception in end year 2014.



Another such cluster has been successfully launched for companies in Bangalore on 14th March, 2015. Following five manufacturing units got the opportunity to be a part of this one year improvement journey:

- 1. Aditya Auto Products and Engg. (I) Pv.t Ltd.
- 2. Devilog Systems (INDIA), Unit III
- 3. GI Auto Pvt. Ltd., Unit II
- 4. GI Auto Pvt. Ltd., Unit III
- 5. GI Auto Pvt. Ltd., Unit IV

CEOs from all the participant companies made themselves present at this important juncture. From ACT, Mr. Dinesh Vedpathak, Head Cluster Programs – ACT & Mr. G. Ananthakrishnan, Expert – ACT Cluster Programs & Counselor of this cluster joined the launch ceremony.

Corrigendum

In the September, 2014 issue of ACT Now, on page no.35, the caption mentioning 1st Runner-up for 9th National Quality Circle Competition was incorrect. The correct caption is as follows:

Correct

"RBB Glitters" Quality Circle Team from Rane Brake Lining Ltd., Ambattur, Chennai

Incorrect

"RBB Glitters" Quality Circle Team from Rane Brake Lining Ltd., Viralimalai

Also, on page no. 36, The Regional QC Competitions Winners of South for Year 2014 were incorrect. The correct are as follows:

Correct

- 1st "Trend Setters" Rane TRW Steering Systems Ltd.
- 2nd "Trishul" Sundaram Clayton Limited
- 3rd "RBB Glitters" Rane Brake Lining Limited & "Surya" Wabco India Limited

Incorrect

- 1st "Sunrise" TRW Steering Systems Ltd.
- ... "Petunia" Harita Seating Systems Ltd.
- 3rd "Jaguar" Sundaram Clayton Ltd. (Hosur)

ACT Now regrets the error and any inconvenience that it may have caused to our readers.

