

SILVERLININGS

APRIL - JUNE 2022 | VOLUME 22

REBOUND



TATA HITACHI CONSTRUCTION MACHINERY COMPANY PRIVATE LIMITED



INDEX OF

CONTENT

Message from the Managing Director	3
Accolades Won	4
Highlights of the Quarter	5
Other News	11
Dealer News	12
Plant News	13
Branch News	17
Customer Meets	18
Key Handovers	19
Key Handovers Value+ Machines	20
Demos and Roadshows	21
Financier Meet and Loan Mela	22
Parts Mela	22
Service Campaigns	23
Operator Training	23
SPE-SPP Skill Competition	24
Employee Engagement	25
Pride	26
Yokoten Newsletter	29



Click on any of the content above to know the details



Message from the Managing Director

Dear Colleagues,

I write to you at a time when the threat of a large severe COVID-19 wave in India is on the wane. As we end the first quarter of the year, let us sit back and introspect the months that we have completed.

During the Pandemic to ensure continued customer engagement, we leveraged new-age Digital communication channels. Now with normalcy returning, we have resorted to conducting more physical activities to gain traction on the ground along with digital initiatives. To augment this, we have re-organized and strengthened our Sales & Marketing Team to deepen our customer engagement and create the kind of meaningful connections that drive long-term loyalty and revenue growth for us.



After almost two years, we participated in two major exhibitions - the **International Mining, Equipment, Minerals, and Metals Exhibition (IME 2022)** in Kolkata and the **11th edition of EXCON** in Bangalore. These events provided us an opportunity to display our extensive line-up of machines, new products, parts and service solutions and more importantly to connect with our customers, dealers, financiers, and vendor partners.

The **Annual Dealer Conference 2022** was held in Bangalore, where we bonded with our dealer fraternity and reinforced our aspirations to rise to new heights through the theme **'REBOUND'**.

The plans at the plant level in terms of products as well as processes are encouraging. Going forward, we have newer launches on the anvil, that will bolster our portfolio to meet the evolving demands of the market.

From the sales perspective, the last quarter has been a very tough one for us. Elevated commodity prices, higher inflation, currency fluctuations, intense competition, and cost-side pressures were the major

deterrents to our business. Sequential price increases to offset the cost pressure have also become inevitable with the rise in input costs.

I firmly believe that our superior-quality machines and services along with our strong customer relationships will defend our dominance in the market. Though we are besieged by fears of global headwinds and recession, let us have a resolute belief in the resilience of the Indian economy and the Government's thrust on Infrastructure for growth in the CE segment.

Let us work together with sheer grit and determination to tide over any challenges that will come our way and steadily improve our performance in the coming months. Let us make sincere efforts to reduce costs, improve operational efficiency and forge ahead.

Take care and Stay Safe.

Warm Regards

Sandeep Singh
Managing Director

ACCOLADES WON



Tata Hitachi Team receiving the Yellow Dot Award for e-Dost



Yellow Dot award 2022



First Prize for Display in Outdoor Area



Tata Hitachi Mining Team with the award at IME 2022



QC Convention 1st Runner up Position for Kharagpur Team



Platinum Award Winner, Transmission Shop

- Tata Hitachi's eDost- Digital Integration for enhanced stakeholder experience received the Yellow Dot Award 2022 under the category of Best innovative use of the digital platform in the ceremony held on 17th May'22 in Bangalore.
- Tata Hitachi was awarded the First Prize in the 'Display in Outdoor Area' category at the International Mining, Equipment, Minerals, and Metals Exhibition (IME 2022)
- In the 11th CII National Poka Yoke competition, two teams from Tata Hitachi, Kharagpur won awards. The team from the Transmission shop won the Platinum award for their case study on 'Elimination of machine damage by operation Sequence Improvement' and the team from the Midi Fabrication shop won the Silver award for their case study on 'Elimination of Probe damage in Mitsubishi Boom machining center by Process Improvement'.
- QC Transmission, Kharagpur team lead by Mr. Shayan Chakrabarti, participated in 34th QC Convention -State Level Quality Circle competition and secured 1st Runner-up position. The team was awarded during West Bengal Annual Business Summit organized by CII.

Congratulations to our team members for keeping the Tata Hitachi flag flying high.

HIGHLIGHTS OF THE QUARTER

IME - 2022



Team Tata Hitachi at The Expo



Sandeep Singh, Managing Director, Tata Hitachi, Inaugurating Tata Hitachi Pavilion



Shin Nakajima, Director, Sales and Marketing, Tata Hitachi, Lighting the Inaugural Lamp



The New Upcoming Wheel Loader ZW225 on Display



ZAXIS 870H On Display

We Participated in the International Mining, Equipment, Minerals, and Metals Exhibition (IME 2022) in April at Kolkata. In this exhibition, we unveiled the new, upcoming 5-Ton Wheel Loader - ZW225, and put up on display the cutting-edge ZAXIS 870H, Sandvik BR4099i Rock Breaker, and Hammerless Tooth Point.



Tata Hitachi Team

EXCON 2021-22

We Participated in the 11th Edition of Excon in Bangalore between 17th-20th May'22. The Hon'ble Chief Minister of Karnataka Mr. Basavaraj Bommai and the Hon'ble Minister for Civil Aviation of India General V.K Singh visited our booth to unveil our new launches.

On display during the exhibition was our range of Compact, Infra, and Mining Equipment, including the recently launched CEV-IV compliant Shinrai Backhoe Loaders and TL340H PRIME Series Hydrostatic Wheel Loader. We also signalled new additions to our product portfolio, which include the launch of ZW225, the all-new 5-Tonne Wheel Loader, and the unveiling of our new cutting-edge indigenously developed mini excavator, NX30. As part of our environmental commitment, we also showcased the CNG variant of SHINRAI PRO Backhoe Loader. Also, on the showcase were the all-new EX200 INFRA, Prime series EX70, and ZAXIS and EX Series range of hydraulic excavators. Tata Hitachi's support solutions on display included a range of attachments and genuine spare parts and an array of service offerings.

In terms of technology, we exhibited our cutting-edge telematics solutions, ConSite and InSite, and eDost, our newly developed digital platform designed for real-time connect with customers and other stakeholders for all their needs, from products, services, attachments, and even industry-related information.

All this garnered good attention from the visitors.



The Hon'ble CM of Karnataka & The Hon'ble Union Minister for Civil Aviation visits Tata Hitachi Pavilion



Senior Leadership inaugurating the Pavilion



EX200 INFRA Launched at Excon



CNG powered Shinrai Pro Showcased at Excon



Machines on the display



Lighting of the lamp at the booth Inauguration



Newly unveiled NX30



Newly launched ZW225 in display



Women of Tata Hitachi with MD, Mr. Sandeep Singh



Customer Interactions

ANNUAL DEALER CONFERENCE



This year's Annual Dealer Conference (ADC) happened on 17th June'22 in Bangalore. The theme for the ADC was 'REBOUND' – urging us to take the inspiration from our own stories of resilience, toughness, and buoyancy to exceed our previous levels of achievement and commit ourselves to rise to newer heights! The event which started with Business discussions ended with an Awards Night where the Dealer efforts were recognized with various categories of awards.





Commemorative Photo taken to mark the milestone celebration

EX2500 CLOCKS 100,000 HOURS OF OPERATION – Hitachi EX2500, sold to

Tata Steel and operating at West Bokaro Open Cast Coal mines and serviced under Full Maintenance Contract by Tata Hitachi, in the first-ever achievement for a Hydraulic Excavator of this class in India, has crossed the significant milestone by clocking 100,000 hours of operation. A celebration to mark this milestone was organized at West Bokaro Division of Tata Steel on 13th June 2022. The event was attended by Mr. Sandeep Singh, MD, Tata Hitachi along with senior officials from Tata Hitachi and Tata Steel.

This Hitachi EX2500 excavator, commissioned in Feb 2003, has proved its prowess, by operating beyond expectations in difficult terrain and long operating hours. This is also a testament to the long-term durability and reliability of the machine and the impeccable standards of maintenance support over the years.

Tata Hitachi's support with proper planned and preventive maintenance jobs, timely life cycle cost compliance, condition-based monitoring of major components, and 24/7 availability of spare parts, played a crucial role in achieving this milestone.



OTHER NEWS



MD, inaugurates the Machine Refurbishment Centre at Dharwad



Celebration to mark 1 lakh followers on Tata Hitachi Facebook page

- Mr. Sandeep Singh, MD, Tata Hitachi, inaugurated the Machine Refurbishment Centre at Dharwad on 29th April 2022. This is in line with our plans to bring focus on our Value chain business and make our footprint in the Used Equipment Market.
- We Celebrated "100,000+ Facebook Followers & Likes" on Tata Hitachi Corporate's official Facebook Page
- We also saw another milestone achievement of "50,000+ LinkedIn Followers" on Tata Hitachi's official LinkedIn Page.

DEALER NEWS

- We welcome Bijjaragi Excavations Solutions to Tata Hitachi family. This new dealership is based out of Vijayapura and will cover Kalburgi, Vijayapura, Yadgir, Raichur & Bidar districts of Karnataka. We conducted 'Swagat', our induction program for the new dealer.
- Chennai dealership, Chennai SSSS Equipments Private Limited has made a state-of-the-art integrated facility at Tindivanam, Tamil Nadu. This integrated facility will provide best-in-class sales and service support to our customers in this area for their equipment, spares, and service requirements. The facility was inaugurated by Mr. Sandeep Singh, MD, Tata Hitachi, Mr. Shin Nakajima, and Mr. Toshiki Onishi. The event was graced by our esteemed customers and senior management of Tata Hitachi and Chennai 4S dealership.
- Mr. Sandeep Singh, MD, Tata Hitachi inaugurated the Head office and Machine Care Facility of our Durgapur Dealer, Mitra Commercial & Automobile LLP. This facility takes us another step closer to our customers to ensure a best-in-class experience for Sales, Service & Spare Parts. The event was graced by our esteemed customers and senior management of Tata Hitachi and Mitra Commercial dealership.
- Nepal Dealer, Dugar Earthmovers Pvt. Limited inaugurated their new Branch in Barbidas, Eastern Nepal.
- Daemo Team conducted a training program for the Nepal Dealer's Field Team
- Jamshedpur Dealer, Vedant Earthmovers partnered with Tata Steel to conduct a seminar on 'Technological Improvement on Tata Hitachi Equipment & latest service offering'.



Induction Program for new dealer Bijjaragi Excavations Solutions, Vijayapura



Training to Nepal Team by Daemo



MD with Mitra Commercial Team



Mitra Commercial HO & Machine care Facility inauguration by MD, Tata Hitachi



Seminar with Tata Steel



Integrated facility inauguration at Tindivanam, Tamil Nadu



PLANT NEWS

DHARWAD

- World Environment Day with the theme "Only one earth" was celebrated in THCM Dharwad with an aim to mark the importance of nature & to raise awareness about protecting the environment. Mr S. Sasano – Alt. Director, GB Kulkarni -Plant Head along with other senior members and volunteers from different functions participated in the sapling plantation drive inside the factory.
- Transmission Parts Paint Shop was inaugurated in Dharwad on 20th June'22. Mr. S. Sasano-Alt. Director did the ribbon cutting and Mr. G B Kulkarni, Plant Head & Mr. K R Kamath, QC Head commenced the Production Authorization.



Inauguration Pooja



Ribbon cutting by Mr. S. Sasano, Alternate Director, Tata Hitachi



Start of Production Authorization by Mr. G B Kulkarni, Plant Head DWD & Mr. K R Kamath, QA & QC Head DWD



Transmission Parts Paint shop inaugurated



Team



Environment Day 2022 celebration at Dharwad plant



Environment Day celebration at Dharwad Plant

KHARAGPUR

- EKIDEN 2022 - Tata Hitachi Ekiden continues to go from strength to strength, year on year. This year's event was held on 3rd Apr'22 with 324 enthusiastic employees participating across 54 teams that included 3 women's teams.

a. Number of Teams Participated – 50

b. Total Number of Participants - 300

c. 1st Place won by Design Team with a timing of 21.59 minutes

This year we also introduced new prizes for the Fastest Lap runner for Men, Women, and Above 45 years of age categories. The event was presided over by MD and HR Head.



MD congratulating the winners from Design Team



Mr. Muralidhar Rao, Head-HR, congratulating the winners



MD congratulating the participants



Winners

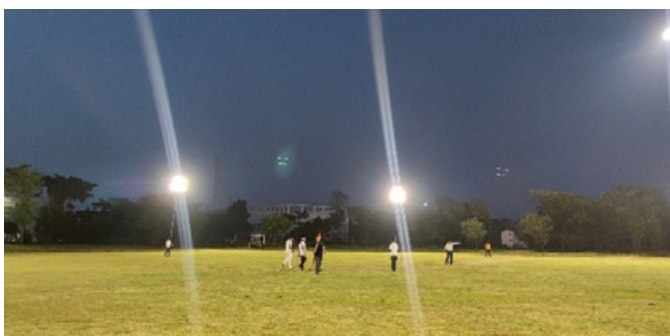


Women's team with MD, Mr. Sandeep Singh

- **Volleyball Tournament** – It was organized in Kharagpur, where around 8 teams participated.



- **Cricket Tournament** – The Tournament was inaugurated by Plant Head on 26th May'22. Around 8 teams participated (A total of 120 employees participated from various departments)



- **Visit of officials from Nirnay Hospital** - Dr. Kancham Kumar Dhara (Obs. & Gynec.) of Nirnay Hospital, Medinipur visited and conducted an awareness session for women employees on the health issues one might face in their lifecycle, due to lifestyle and habits.



- **Employee Helpdesk** – The facility was inaugurated by Plant Head and the Senior Management Team.



- **Environment Day celebration by Tree Plantation** – Kharagpur plant undertook a plantation program to celebrate World Environment Day. The Senior Management team along with members of the engagement committee participated. The theme of World Environment Day 2022 is 'Only One Earth', focusing on 'Living Sustainably in Harmony with Nature'. Kharagpur plant adds more than 1000 saplings in its commitment to improving the green cover, every



- **Inauguration of Safety Training Room at Kharagpur**

- A Safety training room was inaugurated on 4th June '22 by Mr. S. Sasano, Alt. Director and Mr. Anand Kumar, Plant Head. This is a dedicated Safety training facility for contract and on-roll workers at Kharagpur. The facility is equipped with audio-visual arrangements, safety equipment, and display material. In-house training modules on General safety awareness, safe driving habits, Pointing, and Calling have been developed by the EHS team.



- **Visit of CII ER delegation to Plant** - An industrial visit was organized by CII ER comprising of 28 delegates from different industries across West Bengal who visited the plant on 27th Apr'22. These delegates represented a wide gamut of companies across different sectors. They were given an overview of our plant followed by visits to our different shops. The delegates were impressed by the facilities available and overall housekeeping of our shops and termed the visit as an eye opener for them.



- **5th Manufacturing Conclave organized by CII, Jharkhand** - Tata Hitachi Participated and sponsored the 5th Manufacturing Conclave organized by CII, Jharkhand Chapter on 7th June 2022 at Beldih Club, Jamshedpur with the theme of "The Future of Manufacturing". Tata Hitachi was a SILVER sponsor for this event. The Conclave deliberated on the best practices in Manufacturing and discussed the latest trends that are available in the industry to enable manufacturing excellence. The Conclave covered important topics of discussion including the Industrial Internet of Things (IIoT), Robots and Cobots & 3D Printing. There were 6 delegates from our plant who participated in this conclave and Mr. Pranay Kumar (Head-Heavy Fabrication Shop) was a panel speaker on the topic of Robots and Cobots during the event



- **CSR Update –**

- o Water Purifier installed at Baragarh Sasanka Sekhar Bodh Niketan, School for Deaf and Dumb, Debra
- o Medical Camp Organized at Rupnarayanpur Jr. High School on 27th May'22 where 120 people from the village participated and benefitted.

BRANCH NEWS

SALEM BRANCH

- o Our Key Account customer Mr. Selvasundaram, Chairman and Managing Director of Renaatus Projects Pvt. Ltd., celebrated his 60th Birthday on 28th May'22. Our team visited his residence to celebrate the occasion and felicitated him with a souvenir of Tata Hitachi's 60th Anniversary.

Renaatus Projects Pvt. Ltd. is the first customer of Shinrai BX80 during its launch at Salem in Aug'18 apart from having 60+ Tata Hitachi Excavators across segments. The customer's journey with Tata Hitachi started in March 2000 with an EX60 purchase

May we, together, grow to greater heights!

- o Our Team felicitated Mr. Karthikeyan, Executive Director of Thriveni Earthmovers at Salem.



Felicitation of Mr. Selvasundaram, Renaatus Projects Pvt. Ltd., by Tata Hitachi team



Felicitations to Executive Director Mr. Karthikeyan, Thriveni Earthmovers at Salem

CUSTOMER MEETS

Nothing helps us build strong relationships with customers like a little face time. Our Customer meets are precisely one of the most valuable ways to connect with our customer base. Here are the glimpses of Customer Meets conducted



Customer meet at Arwal by Shakar Equipments Ltd



Customer meet at Bargarh by Trishul Tread Pvt Ltd



Customer meet at Bhardhaman, by Mitra Commercial



Customer meet at Giridih, Jharkhand by Vedant Earthmovers



Customer meet at Bishnupur by Mitra Commercial



Customer meet at Kuchinda by Trishul Tread Pvt. Ltd.



Small customer meet and Key hand over at Muzzafarpur, Imperial Wheels



Customer meet at Namakkal by CAG Construction Equipment



Customer Meet at Siwan by Imperial Wheels



Customer meet at Nalanda by Shankar Equipment

KEY HANDOVERS

It gives us immense joy every time we delight our customer with on-time delivery of the machine. Here are the glimpses of few Key Handovers to our customers



Key handover by Salem team to Mr. Senthil Kumar, 2 units ZX220LC



2 units EX215LC SLR - machine handover to Neelkanth, gandhidham



Shinrai Prime Key Handover to Mr. Sachin Bhadale, Pune



Shinrai Prime handover to SA Infra, Pune



Key handover by Salem Team to Mr. Suriyakanth, Shinrai Prime



Customer: M/S Kade Global Infrastructure LLP
Model: Shinrai Prime
Date: 27-04-2022
Authorized Dealer: NE Equipment Solutions Pvt. Ltd.



Customer: Mr. Sahab Uddin
Model: Shinrai Prime
Date: 07-06-2022
Authorized Dealer: NE Equipment Solutions Pvt. Ltd.



CUSTOMER: M/S. SRAVANTHI-MAMATHA EARTH MOVERS
Model: SHINRAI PRIME BS4
Authorized Dealer: M/S. SAI SRK MOTORS, KARIMNAGAR



CUSTOMER: M/S. SRI VEERAJANEYA EARTH MOVERS
Model: SHINRAI PRIME BS4
Authorized Dealer: M/S. SAI SRK MOTORS, KARIMNAGAR



CUSTOMER: M/S. SRI LAXMI EARTH MOVERS
Model: SHINRAI PRIME BS4
Authorized Dealer: M/S. SAI SRK MOTORS, KARIMNAGAR



CUSTOMER: M/S SUNIL EARTH MOVERS
Model: SHINRAI PRIME BS4
Authorized Dealer: M/S. SAI SRK MOTORS, KARIMNAGAR



CUSTOMER: M/S. REVATHI EARTH MOVERS
Model: SHINRAI PRIME BS4
Authorized Dealer: M/S. SAI SRK MOTORS, KARIMNAGAR



CUSTOMER: M/S. VASUNDARA CONSTRUCTIONS
Model: SHINRAI PRIME BS4
Authorized Dealer: M/S. SAI SRK MOTORS, KARIMNAGAR

KEY HANDOVERS - VALUE+ MACHINES

Value+ Machines rolled out from the Machine Refurbishment Facility were sold to end customers. Here we take glimpses of the Key Handovers.



1st Value+ machine handover of EX200LC to Mr. Suresh Yadav, in Barhi, Jharkhand



Key Handover EX200LC Value+ machine to T.Prasad, Tirupati, Andhra Pradesh



EX200LC Value+ to Mr. Mehul Desai, Baroda, Gujarat



EX210LC Value+ key handover to RK Crusher, Salem, Tamil Nadu



EX210LC Value+ - Machine handover to Mr. Maroti Lonare, Chindwara, Madhya Pradesh

DEMOS AND ROADSHOWS

Demos & Roadshows are an effective way to increase the brand awareness and product knowledge among our target customers. Here we take few glimpses of the Demos & Roadshows conducted



Shinrai Prime Demo at Koyal Bricks Site, West Bengal



Shinrai Prime Demo at Barpali, Orissa



TL340H Demo at Chhatarpur, Jharkhand



Shinrai Prime Demo at Ranchi, Jharkhand



Shinrai Prime Demo at Chowka, Jharkhand



Roadshow at Jodhpur for Shinrai Prime Promotion



Shinrai Prime Demo at Udumalpet, Tamil Nadu



Shinrai Prime Demo at Panggram, Assam



Shinrai Prime Demo at Thakuvri, Bihar



Shinrai Prime 4WD Demo at Dhirghat, Assam



Shinrai Prime Demo at Aamguri, Assam

FINANCIER MEET AND LOAN MELA

Financier Meet was held at Jodhpur, which was attended by Key Finance partners, at Bhubaneshwar in partnership with Cholamandalam, and at Durgapur in partnership with HDFC Bank. Also, a Loan Mela was conducted in Patna in partnership with Axis Bank. Here we take glimpses of the activities conducted.



Financier Meet at Jhodhpur by Ramdev Earthmovers



Financier Meet with Cholamandalam by Trishul Tread Pvt. Ltd. at Bhubaneshwar



Financier Meet with HDFC Bank by Mitra Commercial & Automobiles LLP, Durgapur



Loan Mela at Patna with Axis Bank by Shankar Equipments Limited

PARTS MELA

Parts Melas are an effective way to impress upon the customers the advantage of genuine Tata Hitachi Spare Parts. Parts Mela was conducted in Bellary- Karnataka, Aurangabad & Nanded in Maharashtra and in Nepal.



Parts Mela in Bellary, Karnataka



Parts Mela at Nepal by Dugar Earthmovers Pvt Ltd



Parts Mela in Aurangabad



Parts Mela in Nanded



Parts Mela in Nanded

SERVICE CAMPAIGNS

Service Campaigns were conducted at Naidupetta Territory by Nellore Team and at Tekkali by Vijayawada Team.



OPERATOR TRAINING



Training at Brundavana Construction Pvt Ltd,



Operator Training at Ramalingam Construction company's site, Chennai

SPE-SPP SKILL COMPETITION

Here we take glimpses of the SPE-SPP Skill competition that was conducted that was conducted on 13th Apr'22 in Dharwad.

Regional Winners

SI NO	Region	Dealership	SPE Name	SPP Name
1	North	Dada Motors- Mohali	Tushar Yadav	Neeraj Kumar
2	East	Trishul Tread-Jharsuguda	Bulu Biswas	Rasbihari Som
3	West	Kaveen Infra - Ahmadabad	Yogesh Solanki	Darpan Prajapati
4	Central	Kailash Infra – Jabalpur	Prashant Mishra	Manoj Bajpai
5	South1	PSN-Bangalore	Vinay B	Muzahid
6	South2	Rama Excavators-Warangal	Ajay Kumar	Faruddin

Winner & Runner-up of the Finals



EMPLOYEE ENGAGEMENT

- Swagat Program was conducted for New Joinees in April'22. As a part of Swagat, the New Joinees were taken to Dharwad and Kharagpur Plant.



Swagat conducted at Dharwad plant



Swagat Conducted at Kharagpur in Apr'22

- Corporate Office Activities – Monthly get-togethers in the theme of Ed-UI-Fitr, Labor Day, and World Environment Day were celebrated in the months of April, May, and June respectively.



PRIDE

HIGHEST IDEA GENERATORS - APRIL



Mr. Mahesh Kadam

(36331)

Paint Shop

DHARWAD WORKS

70 Ideas



Ms. Sharmistha Nayak

(38772)

Fab manual Midi

KHARAGPUR WORKS

55 Ideas



Mr. Malleshappa Halagali

(36321)

Store

DHARWAD WORKS

25 Ideas



Mr. Amiya Kumar Singha

(37710)

Assem-Wheel & D

KHARAGPUR WORKS

24 Ideas



PRIDE

HIGHEST IDEA GENERATORS - MAY



Mr. Raghavendra Kalaburgi

(36251)

Gear Shop

DHARWAD WORKS

56 Ideas



Mr. Manjunath Gundenahalli

(36280)

STORE

DHARWAD WORKS

50 Ideas



Mr. Paritosh Kumar

(37868)

LMS (Transmission)

KHARAGPUR WORKS

50 Ideas



Mr. Shahjahan Ansari

(38795)

Q A

KHARAGPUR WORKS

48 Ideas



Mr. Ishwaragoud S

(36146)

Q A

DHARWAD WORKS

21 Ideas

PRIDE

HIGHEST IDEA GENERATORS - JUNE



Mr. Apsar Ali

(37663)

SCM

KHARAGPUR WORKS

61 Ideas



Mr. Mukesh Narayan

(38734)

Q A

DHARWAD WORKS

49 Ideas



Ms. Varsha R Yaraganavi

(38786)

Q A

DHARWAD WORKS

43 Ideas



Mr. Deepak Verma

(30656)

Q A

KHARAGPUR WORKS

37 Ideas



YOKOTEN NEWSLETTER – 9th EDITION

With the objective to promote the culture of sharing of knowledge and improvements across the manufacturing system including our key vendors, we are pleased to release the 9th edition of the Yokoten Newsletter, a quarterly publication administered by the Quality Planning & Quality Process Improvement vertical. This edition focuses on “Method”.



YOKOTEN

NEWSLETTER
LEARNING & SHARING



CHALO
DESH
BANAYE

TATA HITACHI

Reliable solutions

May, 2022 | Volume 9

Dear Reader,
Welcome to New Financial Year !

Thank you all for your encouragement & support extended in our last year's versions of the YOKOTEN newsletter. We are pleased to publish 2022's Second edition of the YOKOTEN NEWSLETTER. Through this newsletter, we have been sensitizing about **4Ms (Man, Machine, Material & Method) and Change Management** and also focusing on knowledge sharing related to improvement in all the domains of 4M. In this edition, we will discuss one of the most important 4M "**METHOD**". We will also talk about **Electromagnetic interference/noise inspection methodology**. Also let's have a look at **Kaizen** emphasizing the importance of "**METHOD**".

DID YOU KNOW ?

The grandfather of the modern hydraulic excavator was the steam shovel, First developed in 1796. William Otis was the first to patent a steam shovel in 1839. His steam shovel used chains, pulleys and Gears to transmit power . This machine was used to build the Panama Canal.



IMPORTANCE OF 4M CHANGE MANAGEMENT:



Quality of machine improved



Machine performance Up



Customer Impressed



Sales goes up via "word of mouth"



Profits Up

Below is the reflection of above if 4M change is **not** managed correctly



Quality of machine deteriorated



Machine performance down



Customer Dissatisfied



Sales goes down via "word of mouth"



Profits down

4M CHANGE MANAGEMENT



Before changing the established 4M condition (METHOD) THINK

- Is this method suitable w.r.t the work and dimensional specification achieved by the method ?
- In case of inspection method change , Is the new method capable of detecting all irregularities?
- In case of manufacturing method change, manufacturer (vendor) must contact THCM in advance as per rule.



Benkyou (To Learn) Gallery:

◆ **What is Electromagnetic Interference (EMI):**
Electromagnetic interference (EMI) is unwanted noise or interference in an electrical path or circuit caused by an outside source. It is also known as radio frequency interference. EMI can cause electronics to operate poorly, malfunction or stop working completely. EMI can be caused by natural or human-made sources.

● **Purpose of conducting EMI test in EMI tester:**
The testing is conducted to evaluate performance of electronic parts and components along with the wire harness under intense electric field to check the immunity.

● **Testing Details :**
The EMI tests are conducted based on the standard ISO 11452 which specifies an absorber-lined shielded enclosure method for testing the immunity of electronic components. The device under test , together with the wiring harness, is subjected to an electromagnetic disturbance generated inside an absorber-lined shielded enclosure, with peripheral devices either inside or outside the enclosure. It is applicable only to disturbances from continuous narrowband electromagnetic fields.
Test condition applicable Frequency is 20 to 1000 MHz & Electric Field Intensity: 150 V/m

① **Kaizen**
Let us see an example of a Kaizen focussed on "**Method**" which resulted in prevention of defects during functional testing and avoided line stoppage.

② **Kaizen Theme:**
Improvement in holding valve manufacturing process from manual drilling to CNC drilling.

③ **Problem Details:** Machine boom down operation slow (4.2 sec found against specification 2.3±0.3 sec.). Boom holding valve piston orifice hole diameter oversize.




④ **Why - Why analysis**

1W: Machine Boom Operation Slow (4.2 sec found against specification 2.3±0.3 sec).

2W: Control valve boom holding valve piston orifice hole oversize by 0.12 (Spec- 0.4±0.1mm). It lead to pressure drop & insufficient opening of drain poppet.

3W: Variation in piston orifice hole as existing machining process (Manual drilling) is not precise

4W: Process weakness, manual drilling process is not suitable for precise machining.

5W: Right process is not selected in process planning. knowledge gap to identifying the critical dimensions process selection.

BEFORE AFTER

⑤ **Pictorial Representation**




Manual Drilling CNC Drilling

⑥ **Countermeasure:**

- Process modified from manual to CNC drilling for piston orifice hole to avoid manual variation in process
- Control Plan is updated, piston orifice hole modified to critical to inspection & CNC process.
- PFMEA is updated for piston orifice hole process selection requirement.

BENEFITS:

Tangible Benefit	: Defect reduction during functional testing of machine
Intangible Benefit	: Potential field defect eliminated and Improvement in Customer satisfaction (internal).

HORIZONTAL DEPLOYMENT: Same action implemented in EX70 Arm Holding Valves.

Note : We are keen to know the interest of our readers and look forward to your feedback & comments. Please write in to : Vipul.Kumar@tatahitachi.co.in

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