

VISHWAS

THE MOBILE WORKSHOP

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Ador Fontech Ltd provides reclamation, fusion, surfacing & spraying solutions for Industrial components. With forty years of experience, comprehensive products & services, we provide optimal & efficient solutions. Our extensive sales & distribution network allows us to cover the most remote locations in India within the shortest possible times, thereby, making us, the preferred partner to improve industrial asset utilization.

VISION

Our vision is to be considered as the partner of first choice by our customers.

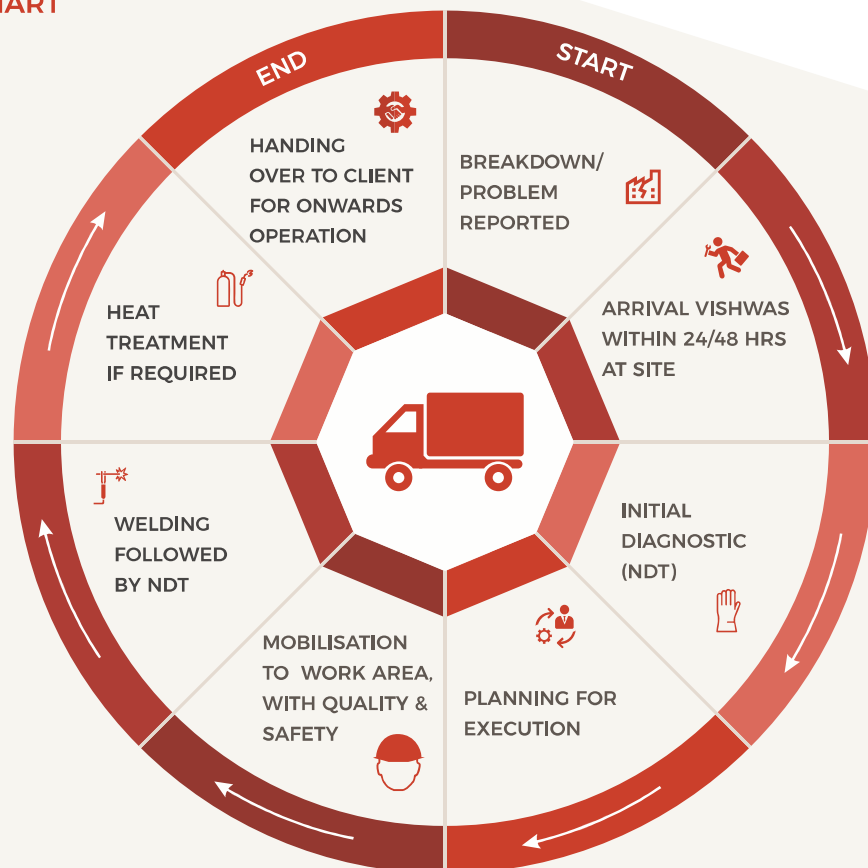
MISSION

Our mission is to partner with our customers in implementing value-added reclamation, fusion, surfacing, spraying and environmental solutions.

OVERVIEW

- Mobile workshop for industrial shutdowns & breakdowns
- Servicing the cement, steel, power, mining & sugar industries
- Urgent resolution to reduce downtime of plant & equipment operations
- Provide immediate solutions (on-site)
- Technicians are multi-tasked and experts for onsite services
- Available 24 x7, 365 days a year

FLOW CHART



CAPABILITIES OF VISHWAS

CEMENT APPLICATIONS

- Kiln Shell joints
- Kiln shell replacements
- Kiln tyre repair
- Blow bar crusher rotor Crack repair
- Ball mill trunion Crack repair
- Girth gear teeth repair
- VRM Hub crack repair



STEEL APPLICATIONS

- Grizzly Bar
- Sinter Spikes
- Blast Furnace shell cracks
- Broken shaft/Rollers



POWER APPLICATIONS

- Roller journal shaft cracks
- Roller journal Housing rebuilding
- Crusher rotor @ CHP
- Ball mill cracks
- Shaft repairing
- Bracket repairing

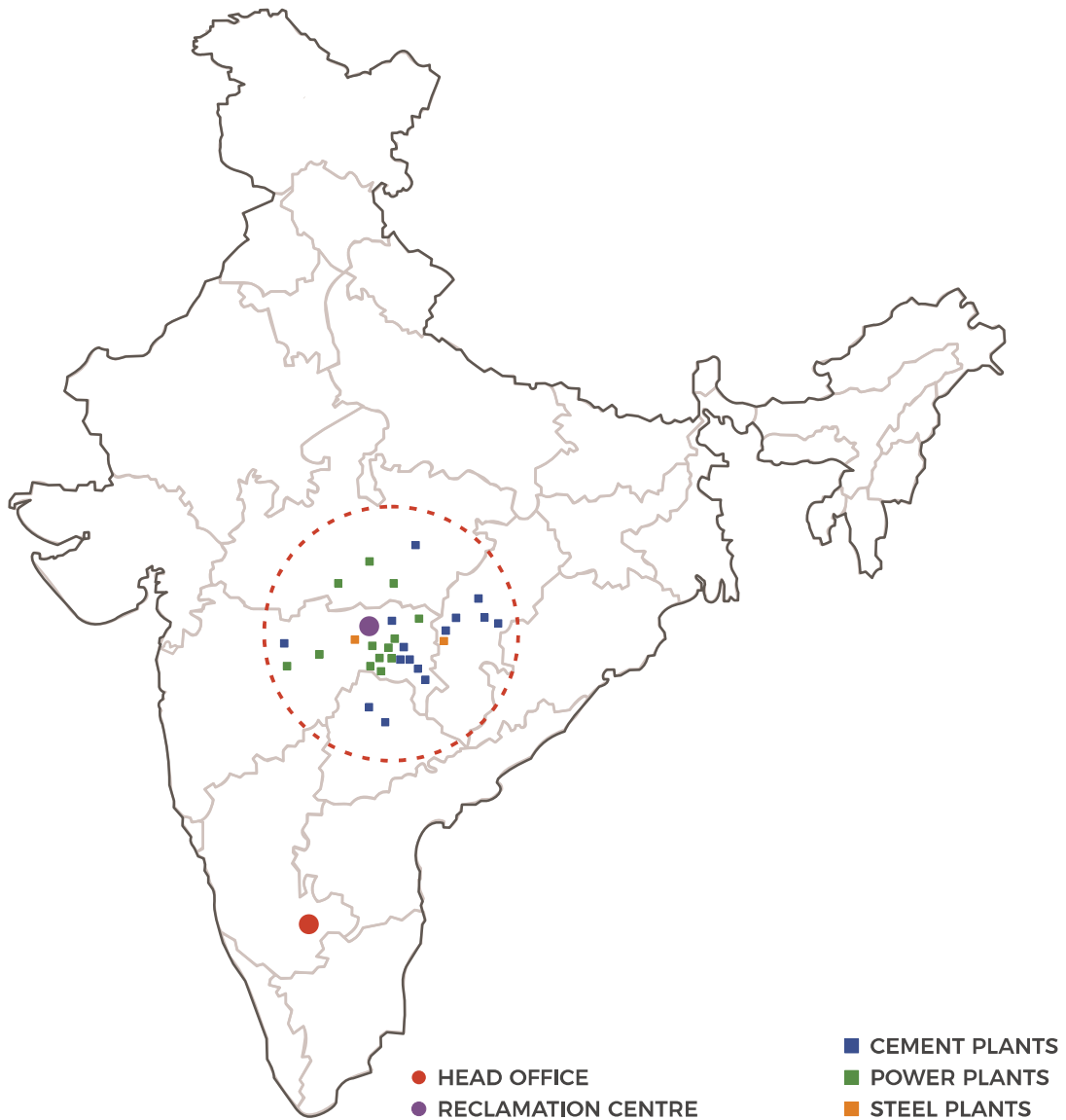


ONE STOP WORKSHOP

Vishwas is a fully equipped workshop to cater the urgent needs of the down Plant/Equipment. It consists of all the necessary machines, accessories, tools and tackles to service the requirements, promptly.

AREA OF OPERATION FOR VISHWAS

- Base station: Ador Fontech Job Repair Shop, Hingna Factory, Nagpur, Maharashtra.
- Operating within 250Kms radius of base station
- Operational in Maharashtra, MP, Chhatisgarh, Telangana, AP (all within 250KM radius of Nagpur)



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HIGH-LIGHTS OF LE SERVICES

RECLAMATION, FUSION AND SURFACING SOLUTION PROVIDER



As you are aware, that Ador Fontech Ltd., as pioneer in the field of specialized welding, Cladding and Coating and life enhancement services. We started our activities way back in 1990s. We have come out with some of the most prestigious **LE (Life Enhancement)** activities related to various industrial critical components.

Under the division known as LE SERVICES, we undertake total turnkey solutions for core sector industries like, Power, Cement, Steel, Mining, Refineries, General Engineering, Aluminum, etc

Over the period of more than 20 years, we have successfully carried out various jobs for many of our customers in India through our specially trained, dedicated teams using our performance proven welding alloys and state of the art equipments.



We are very much confident that, you also will find our services effective to your requirements. We look forward to receive your valued enquiries. Details about us in brief are as follows.

LE SERVICES NAGPUR ACTIVITIES

PLOT AREA: 8100 SQM - COVERED SHED AREA: 3100 SQM



- **Fabrication** of shells for kilns, vessels and other components.
- Undertaking on-site, **in-situ joining of kiln shells** by automatic welding process including mechanized cutting of shells
- involving critical welding e.g. repair of shafts, Kiln tyre cracks, crusher rotors etc.
- Total refurbishment of **LS crusher rotors & clinker crusher rotors**, sinter crusher rotors Fabrication and then internal & external cladding of pipes, bends, elbows, reducers, cones etc. by automatic, electronically controlled open arc welding process for abrasion at normal as well as high temperatures. Pipes forms above 6 mm thickness, 200 mm dia. and 6-mtr lengths are cladded.





- Super conditioning & reclamation of vital machinery components through state-of-the-art
- **PLASMA SPRAY** system.
- Surface treatment by twin wire **ARC SPRAY** process for petrochemical & refineries, involving SS Inconel & Aluminizing coating.

• **Steel Mill rolls** rebuilding system with twin torch, oscillating, electronically controlled fully automatic Open Arc & Sub Arc welding System with heating and chipping arrangements. For Rolls like Concast rolls, Pinch Rolls, Pipes, shafts etc. upto 500 mm barrel dia., upto 3 m length & upto 5-ton weight.

- **Rebuilding of tyres, rollers, roller segments, roller shells, table liners, grinding rolls and bull ring segments of vertical roller mills** used for Coal, Lime - stone, Slag and Clinker grinding of make like Loesche, FL Smidth, Ube, Loesche-Ube, Fuller, Polysius, Koppern, Kobe, BHEL etc by automatic, electronically controlled open arc, sub-merged arc and gas shielded welding processes. Jobs upto 5-mtr dia and 20 ton in weight are undertaken.



- Rebuilding of **rollers of hydraulic roller presses**, kiln support, crushers etc. of Polysius, KHD - Humboldt, Koppern, Fuller make etc. by automatic, electronically controlled open arc, sub-merged arc and gas shielded welding processes. Rollers upto 2-mtr dia. and 25 ton in weight are undertaken.



- Manufacture and fabrication of **ENDURAPLATES** wear resistant plates by automatic, electronically controlled, open arc cladding process. Chutes, hoppers, liners, cyclones, ducts, casings etc. are some of the applications.

"OUT-SOURCED ACTIVITIES"

- **Casting:** We have approved foundries for casting. One is located in Nagpur & other in Bhilai. Both are well established & reputed in their field. Each has got 10t capacity induction furnaces and achieve one piece casting of 12t. We deploy our inspection team to carry out the quality check as per pre-approved QAP even though the same is also done by the vendors.

- **NDT : Radiography / UT / DP** – Through 2 approved vendors at Nagpur.

Chemical analysis - Through approved vendors at Nagpur. There are 2 vendors approved for this activity. One is REC Nagpur & other is MIDC Industries Association Lab. Both are NABL approved.

Mechanical Testing - Through 2 approved vendors at Nagpur. One is REC Nagpur & other is MIDC Industries Association Lab. Both are NABL approved.

- **Machining:** We have a very limited machining facility. For critical jobs, we get the machining done through 4 approved vendors at Nagpur which are within 4/5 km from our plant. They have VTL, heavy duty lathes, Plano-millers, CNC boring machines with good capacity to handle heavy jobs.
- **Heat treatment:** In house heat treatment facility is available. For custom built jobs vendors are deployed as and when required. There are 2 vendors for pre-heating, stress relieving and post weld heat treatment work. Each has got their good set-up along with thermograph printing. All heat treatment work is done at our plant only.
- **Site jobs:** Scaffolding, portable compressors, installation & erection work, contract labors, heavy & light transport, mobile and crawler cranes, mechanical work like piping, blanking & de-blanking, blinding & de-blinding, fabrication, hot-bolting and catering.

MAJOR INDUSTRIES SERVED

Steel, Cement, Power, Mining, Refineries, General Engineering, Aluminum,

MAJOR JOBS DONE



THERMAL SPRAY COATING ON BOILER TUBE

High temperature corrosion and erosion of heat transfer pipes in coal fired boilers, such as tubes for super heaters and water walls, are recognized as a severe problem, resulting in tube thinning and premature failure.

In the application of a thermal spray coating, a metal powder is heated to a high temperature and propelled toward the boiler tube surface with a high velocity gas (HVOF) or plasma jet. Once at the surface, the particles form a coating. Thermal spray coatings have the advantage of being applied in-situ in the boiler and as a consequence, they are more easily repaired after exposure.



Coating Requirement

- High Hardness (To prevent erosion because of ash and silica) Hot corrosion resistance (that will react with the environment to produce a slow growing protection oxide scale, which should not allow the corrosion species to diffuse into the coating)
- Low porosity (Less area for erodent particle to impact and abrade)
- Small grain size (small grains tend to be stronger)
- Absence of cracks (Ductile structure, thermal stability, cracking lead to spalling)
- Uniform coating structure (Homogenous distribution of hard constituents & ductile behavior)
- Smooth Surface

High chromium content nickel based alloy Cr₃C₂-NiCr & In presence of sulfur and vanadium atmosphere NiCrTi & amorphous alloy of FeCrBSi as a widely used corrosion & wear resistant coating material, possesses good ability against oxidation, sulfur induced corrosion and hot corrosion.

Chromium Carbide (Cr₃C₂)

Due to hard chromium Carbide content, it offers more erosion resistance.

Nickle Chromium (NiCr)

- a) Chromium is a corrosion resistance alloy that binds the continuous skeleton of erosion resistant chromium carbide constituents.
- b) Due to high binding energy and ductility, nickel exhibit enhance erosion resistance by their ability to dissipate the impact force to particles by plastic deformation.

Feric Chromium Boron Silicon (FeCrBSi)

A FeCrBSi amorphous alloy producing a partially amorphous, hard abrasive and corrosion resistance coating, with a service environment upto 920°C. Typical grinding and lapping techniques can be used to obtain high chrome like finishing. It can be used in a wide variety of high wear applications, anti skid surfacing applications and corrosion environment.

**LIFE ENHANCEMENT
SERVICES
—
CEMENT**



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COARSE FEED VALVES/ ROTARY AIR-LOCKS

TOTAL REFURBISHMENT
OR NEW MANUFACTURE.



AREA OF CONCERN

The body & rotor wears out due to heavy handling of material & its abrasiveness. The gap between rotor blades & body increases making it difficult to control feed rate and smooth operation of rotor.

SOLUTION

Refurbish the body and rotor with added features like use of 'Hardox' or 'Enduraplates' or 'Cast-fused' liners for enhanced resistance to severe abrasion. The performance life is enhanced considerably.

APPLICATIONS

Limes Stone, Clinker, Slag or Coal.

KEY PROCEDURE

- Removal of worn-out parts
- Fabrication of new parts
- Machining of rotor & body
- Fitting of new liners & assembly
- Balancing & finishing

SOME OF OUR END USERS

- ACC Ltd.
- OCL India Ltd.
- UltraTech Cement Ltd.
- Prism Cement Ltd.
- Nuvoco Vistas Corp. Ltd.
- Ambuja Cements Ltd.

ROLLER PRESS - ROLLERS

TOTAL REFURBISHMENT, IN-SITU
PROFILING OR IN-SITU REBUILDING,
SHAFT REPAIR

AREA OF CONCERN

- a) Rollers getting wear out due to heavy handling of material & it's abrasiveness, under very high pressure. The gap between rollers increases making it difficult to control required size.
- b) Chunks of base material coming out of roller, disturbing it's balance and grinding efficiency.

SOLUTION

Refurbish roller by removing old deposit, rebuilding it by automated WOL process and profiling – all in controlled welding conditions and temperatures. The performance life is enhanced considerably and we ensure that Chunks won't come out during operation.



APPLICATIONS

Limes Stone, Clinker or Slag.

KEY PROCEDURE

- Removal of old hard deposit & levelling of surface
- NDT of roller & shaft
- Repair of cracks if any and filling of craters locally
- Stress relieving
- Weld build-up & hard deposit
- Profiling & finishing
- Inspection

SOME OF OUR END USERS

- JK Lakshmi Cement Ltd.
- Maihar Cement
- Manikgarh Cement
- Vasavadatta Cements
- UltraTech Cement Ltd.
- Nuvoco Vistas Corp. Ltd.
- Orient Cement Ltd.
- Ambuja Cements Ltd.
- Shree Cement Ltd.
- ACC Ltd.

ROLLER PRESS - BEARING HOUSINGS

TOTAL REFURBISHMENT OF
ID I.E. BEARING SEAT

AREA OF CONCERN

The ID of the bearing housing wears out due to relative motion between bearing and housing. This results in free rotation of bearing and may cause loss of lakhs of rupees due to seizure or breakage of bearing. The cost of bearing, cost of bearing change and loss of productivity are main concern.

SOLUTION

Refurbish the body at ID and carry out machining.

APPLICATIONS

All roller presses used for Limes Stone, Clinker or Slag.

CRITICAL

Tolerance and co-centricity of repaired area.

KEY PROCEDURE

- Undercut
- Build-up of worn out surface
- NDT of roller & shaft
- Repair of cracks if any
- Stress relieving
- Finished machining
- Inspection

SOME OF OUR END USERS

- Orient Cement Ltd.



KILN - TYRE CRACK REPAIR

IN-SITU REPAIR OF ALL CRACKS
DETECTED IN KILN TYRES



AREA OF CONCERN

The crack may develop rapidly in tyres if continued to work in the kiln. Tyres are casted and not readily available. Lead time to supply may vary from 4 months to a year and mostly imported. Huge down time resulting in production loss as well as cost involved in tyre replacement. Developed CREEP may cause further damage to other parts of Kiln if tyre is allowed to run without repair.

SOLUTION

Detect and repair cracks in tyre, carry out PWHT and run the kiln till new tyre arrives. Ador has performance proven welding consumables and Quick Response Team to undertake this repair work.

APPLICATIONS

All tyres used in rotary kilns or driers or coolers of Cement, Steel, Chemical or Fertilizer plants.

KEY PROCEDURE

- NDT of tyre to mark exact location of cracks
- Arresting cracks to prevent further propagation
- Removal of cracks & surface preparation
- Weld build-up
- PWHT & finishing
- Inspection

SOME OF OUR END USERS

- India Cements Ltd.
- Shree Digvijay Cement Co Ltd.
- Saurashtra Cement Ltd.
- Shree Cement Ltd.
- UTCL Rawan

KILN - SHELL JOINTS BY SAW

CARRY OUT WELDING OF SHELL JOINTS BY AUTOMATED PROCESS THUS REDUCING PRECIOUS SHUT-DOWN CONSIDERABLY AND HUGE SAVING WITH HIGHEST QUALITY WELD JOINTS



AREA OF CONCERN

MMAW of joints may take up to 6 to 8 days depending upon thickness of shells. Thus, warranting more time of shutdown. This is essential activity and can't be avoided. Being MMAW, quality of welding within a joint itself may vary depending upon welder's skill. Uneven fusion, development of stresses and non-uniformity of welding may lead to bad quality.

SOLUTION

Deployment of SAW process cuts down welding time by at least 4 to 5 days! Thus, saving lots of shut-down time. Strictest control over welding parameters ensure uniform weld bead quality, generation of lesser/negligible stresses and almost ZERO defects.

APPLICATIONS

All rotating equipment like kilns, ball mills, drier drums or cooler drums used in Cement, Steel or Chemical plants.

KEY PROCEDURE

- Root run welding & gouging
- NDT of shell & joint
- Repair of cracks/defects if any
- SAW
- Inspection



KILN - JOBS ON TURN-KEY BASIS

FABRICATION & REPLACEMENT OF KILN SHELLS, COWL, TYRES, GIRTH GEAR CHANGE OR REVERSAL ETC.



AREA OF CONCERN

None. ADFL offers turn-key solution with fabrication and services at one stop.

- Alignment and welding
- NDT
- Inspection

APPLICATIONS

All rotating equipment like kilns, ball mills, drier drums or cooler drums used in Cement, Steel or Chemical plants.

SOME OF OUR END USERS

- Ramco Cements Limited
- Maihar Cement
- Cement Corp. of India

KEY PROCEDURE

- Fabrication of shell, NDT and dispatch
- Mobilization of crew & equipment
- Preparatory work before shutdown
- Runout & ovality measurement, Shell cutting & fitting of new shell





LIFE ENHANCEMENT OF INDUSTRIAL COMPONENTS



KILN - SUPPORT AND THRUST ROLLS

TOTAL REFURBISHMENT WORN OUT ROLLERS OR REPAIR OF CRACKS.

AREA OF CONCERN

The support roller body wears out TAPER due to heavy load of kiln. Shaft also develops scratches at seal area. Thus, uneven load on rollers may tend to develop cracks and oil leakage.

SOLUTION

ADFL offers rebuilding of barrel of rollers and repair of shafts, at the same time maintaining surface finish, critical dimensions and stress-free component. Refurbishment is done by welding as well as thermal spray coatings.

APPLICATIONS

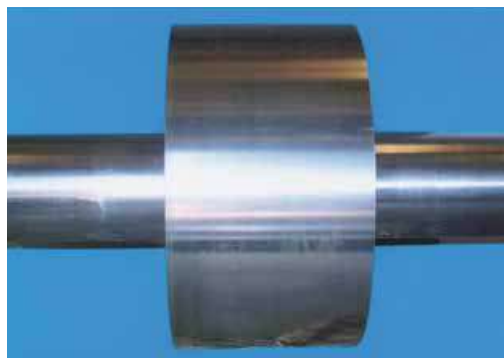
All rotating equipment like kilns, ball mills, drier drums or cooler drums used in Cement, Steel or Chemical plants.

KEY PROCEDURE

- Undercut over roller & shaft & levelling of surface
- NDT of roller & shaft
- Repair of cracks if any and if repairable
- Weld build-up & Stress relieving
- Finished machining
- Inspection

SOME OF OUR END USERS

- Maihar Cement
- Manikgarh Cement
- Vasavadatta Cements





BALL MILL - TRUNION HEAD CRACK REPAIR

IN-SITU REPAIR OF ALL CRACKS
DETECTED IN BALL MILLS

AREA OF CONCERN

The crack may develop rapidly in mill heads if mill is continued to work. The mill Trunion heads are very thick and may be accessible only from out. Changing mill heads warrants availability of mill head which is very remote and also lead time to supply may vary from 4 months to a year. Huge down time resulting in production loss as well as cost involved in replacement. Developed CREEP may cause further cracks in head if mill is allowed to run without repair.

SOLUTION

Detect and repair cracks in mill head, carry out PWHT and run the mill till new mill head arrives. Ador has performance proven welding consumables and Quick Response Team to undertake this repair work.

APPLICATIONS

All balls mills used for grinding Clinker, Slag or Limes stone in Cement plants.

KEY PROCEDURE

- NDT of Trunion to mark exact location of cracks
- Arresting cracks to prevent



- further propagation
- Removal of cracks & surface preparation
- Weld build-up
- PWHT & finishing
- Inspection

SOME OF OUR END USERS

- Manikgarh Cement
- UltraTech Cement Ltd.
- JK Lakshmi Cement Ltd.
- Binani Cement Ltd.
- Ambuja Cements Ltd.
- Vasavadatta Cements
- Sanghi Industries Ltd.
- Heidelberg Cement India Ltd.
- Shree Cement Ltd.
- Maihar Cement

CRUSHER - ROTORS

TOTAL REFURBISHMENT OR NEW MANUFACTURE



AREA OF CONCERN

Rotor discs & Shaft wears out due to heavy handling of material & it's abrasiveness. The enlarged pin diameter and thinning of discs makes it difficult to operate rotor smoothly. Many times, blow bar holder also breaks making it impossible to operate.

SOLUTION

Refurbishment is carried out by replacement of all discs but retaining used shaft in case of hammer crusher. For Blow Bar Crusher Rotor, total health check-up of rotor is carried out for cracks etc.

APPLICATIONS

Limes Stone, Clinker or Slag.

KEY PROCEDURE

- Removal of old discs
- Levelling of shaft surface
- NDT of shaft
- Procurement, cutting & machining of new discs
- Fitting and alignment of new discs over used shaft
- Joining of new discs by welding and Stress relieving
- Hard deposit over wear prone area of discs
- Line boring & finishing
- Inspection

SOME OF OUR END USERS

- JK Lakshmi Cement Ltd.
- Prism Cement
- Ambuja Cements Ltd.
- Nuvoco Vistas Corp. Ltd.



VERTICAL ROLLER MILL - ROLLERS AND HUBS

TOTAL REFURBISHMENT AT OD &/OR ID OR REPAIR OF CRACKS

AREA OF CONCERN

The OD or ID of roller/ hub gets wear out due to relative motion of tyre or bearings, loosening tyre or bearing or both making the roller inoperational.

SOLUTION

Roller's MOC is usually either Cast Steel or Cast Iron. Rebuilding of surface in case of later is very expensive comparative to former. Hence, it is essential to know MOC before we quote. Undercut, heat treatment, WOL build-up, NDT and finished machining is done.

APPLICATIONS

VRM rollers used in grinding of Limes Stone, Clinker, Slag or Coal.

KEY PROCEDURE

- Undercut over roller & levelling of surface
- NDT of roller
- Repair of cracks if any and if repairable
- Weld build-up & Stress relieving (PWHT)
- Finished machining
- NDT
- Inspection

SOME OF OUR END USERS

- Chettinad Cement Corporation Ltd.
- Binani Cement Ltd.



VERTICAL ROLLER MILL - TYRES AND TABLE LINERS

REBUILDING IS DONE BY WOLPROCESS USING FLUX CORED WIRES.

AREA OF CONCERN

The tyre/ shell & table liners wear out due to heavy amount of material handled and it's abrasiveness. The gap between tyre & table liners as well as crushing angle change reducing the output of the VRM thus reducing efficiency and power consumption.

SOLUTION

Rebuild the worn-out surface by automated, electronically controlled WOL process using flux cored wires. The WOL deposit is far superior than the base material, metallurgically, offering excellent wear resistance. With our FCW, it is possible to rebuild multiple layers for as high as 80 mm thickness!

APPLICATIONS

Limes Stone, Clinker, Slag or Coal.



SPECIFIC REQUIREMENT

For faster delivery, please mark all table liners or segments of roller for numbers as well as directions. This will reduce the time required for matching profile, considerably.

KEY PROCEDURE

- Removal of old hard deposit & levelling of surface
- NDT of rollers / roller segments/ tyres and table liners
- Weld build-up hard deposit and matching profile / angle
- Finishing
- Inspection

SOME OF OUR END USERS

- India Cements Ltd.
- Ramco Cements Ltd.
- Raymond Cement
- UltraTech Cement Ltd.
- Manikgarh Cement
- Vasavadatta Cements
- Gujarat Sidhee Cement Ltd.
- JK Cement Ltd.
- JK Laxmi Cement Ltd.
- Maihar Cement
- ACC Ltd.
- Birla Corporation Ltd.
- Ambuja Cements Ltd.
- Prism Cement Ltd.



VERTICAL ROLLER MILL - CLASSIFIER ROTORS

TOTAL REFURBISHMENT OR NEW MANUFACTURE



AREA OF CONCERN

The classifier rotor is subjected to severe, high velocity particle erosion by material being ground in VRM.

SOLUTION

Refurbish the rotor by replacing vanes and hard-facing new vanes for added wear resistance. Other options like use of 'Hardox' or 'Enduraplates' or 'Cast-fused' liners for enhanced resistance to severe abrasion are also available. The performance life is enhanced considerably.

APPLICATIONS

Limes Stone, Clinker, Slag or Coal.

KEY PROCEDURE

- Removal of old worn-out vanes & flanges
- Manufacture of new vanes & flanges with hard facing
- Assembly, alignment & welding of vanes & flanges
- Finishing & balancing
- Inspection

SOME OF OUR END USERS

- Prism Cement Ltd.
- UltraTech Cement Ltd.
- Nuvoco Vistas Corp. Ltd.
- Orient Cement Ltd.

THE COMPANY

Ador Fontech Limited was incorporated on August 22, 1974 and set its course on repair welding from December 1, 1979. Initially, it started functioning as a trading unit under the banner of 'Cosmics General Engineering'. Thereafter, a process was initiated to bring in the best of technology to India from across the globe. Through dint of application engineering, the Company enriched itself to become a manufacturing organisation and today, it is a total solution provider.

VISION

Our vision is to be considered as the partner of first choice by our customers.

MISSION

Our mission is to partner with our customers in implementing value-added reclamation, fusion, surfacing, spraying and environmental solutions.

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