



**INDIA'S LARGEST HEAVY ENGINEERING WORKSHOP**



# Built on Process Performance - Conditioned to Grow



## It all started during First World war

Dr. Hendrik Van Der Horst developed the first effective method of inducing porosity into a chrome surface finish, thus pioneering the world's porous chroming industry in 1995. His Porous Krome process has made possible the economic reclamation of countless number Diesel, gas and other engine / compressor / Hydraulic cylinder parts over the intervening years.

Electroplating is an integrated process at United Van Der Horst. We provide perfectly matched concepts for equipment, chemistry and services. Our program covers technologies for the entire spectrum of decorative and functional surface treatment for various materials. United Van Der Horst's plating technology proves its quality and dependability wherever a brilliant finish, corrosion protection and durability are in demand.

## Think Globally - Serve Locally

United Van Der Horst was established as a Public Limited Company in 1990 to offer "Porous Krome" plating technology and other specialized reconditioning services to the core sectors in India. By combining the patented chrome plating techniques and highly specialized welding processes, the company provides Design, Developments, Manufacturing, Reconditioning and Re-standardsizing services to Marine, Oil field, Power plants, Railways, Petrochemicals, Mining and other processing industries. Within a short span, the company not only received a wide satisfied customer base but also received API 6A, API SPEC Q1, API QMS - REGISTER, API TS-29001.

This certificates issued by the American Petroleum Institute shows the company's dedication towards the High

Quality standards and ensures commitment to modern quality systems, sound engineering and operating practices.

## It is success that counts, but a strong background does not hurt either

The change in ownership of the company in 2005 has brought in high emphasis on quality, innovation and customer support which added more power to United Van Der Horst. We have thus taken another step forward in our mission to be a worldclass company, thus encouraging us to excel continuously.

## The Very Best for your success - Our people

Behind every job lies sound team work of 275 well reputed, efficient and effective workforce. Our engineers are practical men who would welcome an opportunity to analyze any maintenance / reclamation situation and provide definite answers as to which of the process or combination of process would best solve the problem in the most economical manner. We strive to be ahead combining the strength of technology with the creativity and determination of a dedicated team.

## Becoming better every day - A Promise

Working in extreme conditions has enhanced our motivations, competitive spirit and drive for improvement. A successful blend of performance and responsibility to the customers has made United Van Der Horst, the number one company in this field. Discovering solutions to your problems helps us to develop our technologies so that we can continue meeting tomorrow's needs today.

*What really distinguishes us from the others is that we recondition by  
RESTANDARDSIZING and not DESTANDARDIZING*



## Grinding



Friedrich Schmalts make German Cylindrical cum Crank shaft grinding machine equipped with CNC controller. At United Van Der Horst we ensure that jobs are immediately undertaken for precision grinding. We are capable to grind various jobs with an accuracy of 0.01 mm i.e. 10 microns and surface finish of Ra value less than 0.4 micron.

*Capacity: Jobs with diameter up to 1250 mm and length in excess of 11 meters are easily accommodated.*

*Qty. 3 Nos.*





## Honing

Gehring make German Vertical Honing machine with its unique self aligning mechanism, due to which concentricity & circularity can be maintained within 5 to 10 microns. This unique feature make this machine different from conventional horizontal honing machine. Our valued customers bear testimony to our competence.

*Capacity : Jobs with bore diameter up to 1200 mm & length in excess of 8 meters, can easily be honed on our Vertical Honing machine.*

*Qty. 2 Nos.*





## Chrome Plating

Van Der Horst - Holland due to their innovations in advance chrome plating technologies such as its patented "Porous Krome" set up its plant in India to cater customers in South Asia. United Van Der Horst has boost its excellence in porous and hard chrome plating for different diesel engine parts and various other components of hydraulics, with due considerations to environmental safety. Components are chrome plated with hardness up to 60-65 HRC and are super finish to achieve required surface finish value. Plating process followed by United Van Der Horst has been approved by American Bureau Society (ABS) and tested at NABL approved laboratory for Salt Bath Test, Chrome peel off test, hardness Test.

*Capacity : Jobs with maximum diameter of 1 meter and length in excess to 10 meters can easily be chrome plated at our plant.*



## Groove Grinding



Piston crown for diesel engines are ground to an accuracy of 0.01 mm on our Vertical Turret Lathes. This tolerance is lowered to a much higher accuracy whenever required. Also machine is equipped with DRO (Digital Read Out) for accurate machining.

*Capacity : Diameters up to 900 mm can easily be ground.*

*Qty. 1 No.*



## Boring

Jungenthal make German origin horizontal boring machine which can easily handle jobs like 2-meter diameter Bull Gear, Cylinder Heads in excess to 1000 mm bore diameter, Nitrogen compressor cylinder bore up to 800 mm diameter, Rolling mill equipment's like Work roll and Back up roll chokes of size 1500 mm diameter are easily be machined on our boring machine.

*Capacity : With its rotating table of 1 x 1 meter and with spindle of diameter 150 mm. We can do machining of jobs having horizontal travel up to 3 meters, vertical travel of up to 1.5 meters with weighing capacity of 15 Ton.*

*Qty. 2 Nos.*



## Vertical Turret Lathe (VTL)

Jungenthal make German Vertical Turret Lathes to perform high accuracy machining such as turning and groove grinding. Jobs such as Main Engine Components like Piston Crown, Cylinder Cover, Oil Field equipments like Mud Pump module, API Spools and Flanges, Wind Mill parts like Kind Pin, parts of Hydraulic Cylinders can easily machined with good accuracy and surface finish.

*Capacity : Diameters up to 1.5 meters and height up to 1.5 meter can be easily accommodated.*

*Qty. 1 No.*







# MACHINE SHOP

 **UVdHL**  
UNITED VAN DER HORST LTD.



## CNC Machine Shop



Upto 3000 mm Diameter



## In-situ Machining

In-situ machining facility available at United Van Der Horst can do face machining up to 1.5 meters diameter with the help of a pneumatic drive. API ring groove can also be repaired with help of this in-situ machine. Successful jobs done are - Repair of Jacking System's Hub in/out board seating face for *Transocean Offshore*.

Qty. 1 No.



## Submerged Arc Welding (SAW)

Submerged Arc Welding (SAW) with the help of 10 Ton positioner, our welding expertise find it easy for welding over wide range of products like AGC cylinder, Work roll chock, Pinion Shaft, Bevel Gears, Pinion, Piston, Piston Head and many more components with submerged arc welding process.

*Capacity : We can easily handle components in excess of 10 Ton for welding components of various types & shapes.*

Qty. 2 Nos.





## Stress Relieving

Microprocessor controlled electrical stress relieving furnace ensures the right cooling and heating rate. It is equipped with two overhead mounted heavy duty blower which ensures uniform temperature all around the furnace. With its mechanized door and trolley operations can get the excess of job very easily.

*Capacity: This can take jobs up to size of  $8m^3$ , (2mx2mx2m) The maximum achievable temperature is  $900^{\circ}C$ .*

*Qty. 2 Nos.*



## Welding

At United Van Der Horst, we got approved WPS (Welding Procedure Specification) from third parties like ABS, DNV, IRS for the specific application & based on the material of composition which are tested at certified laboratory. Also our welders are 6G approved. Our welding capabilities cover the entire spectrum of welding - SMAW, SAW, TIG MIG etc. Our specialized welding like Aluminum Bronze cladding is approved by ABS - Huston. These process are specifically for load / guide / bearing application and to avoid scoring, wear & tear etc for internal and external surfaces. At United Van Der Horst different diesel engine components such as Exhaust valve spindle and Exhaust valve seat's damaged faces are weld build up using stellite weld material to provide hard and wear resistance surface. All the electrodes are baked at a temperature of  $150^{\circ}C$  to  $200^{\circ}C$  prior to welding to achieve sound welding.

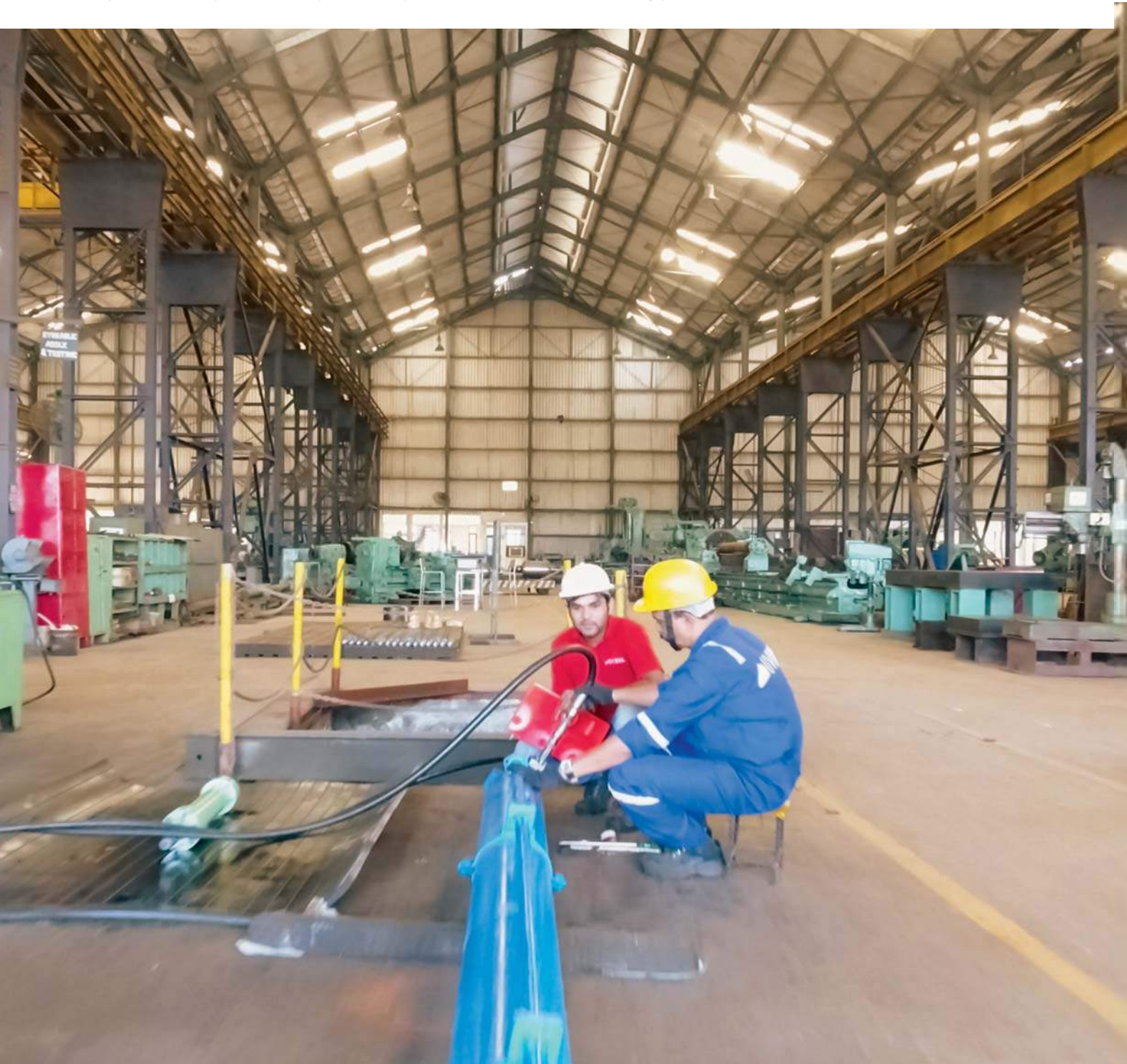
*Qty. 6 Nos.*





## Testing

With oil reservoir capacity of in excess of 1500 liters we can easily test all types of hydraulic operated cylinders up to pressure of 300 bar and more using self-made power pack. The filtration unit attached to the power pack enables in maintaining the NAS value less than 10 microns. For servo controlled equipment's the NAS value will be maintained less than 5 before connecting the system with the equipment. The auto cycling facility present in our power-pack makes us to provide a smooth and jerk free operation for all hydraulically operated equipment's. United Van Der Horst can pressure test equipment up to 25000 PSI Hydraulic / Water Pressure. We also provide load test of different hydraulic components at a pressure up to 600 bar on our load testing pit.



## Testing

- Hydro testing upto 25,000 PSI
- Load testing upto 3,000 tons
- Break-way pressure testing
- Pressure cycling / cycle test
- Flow / Pressure drop testing
- Vibration / hysteresis loss testing
- Velocity / viscosity factor / frictional test
- Fatigue / creep test at varied load
- Magnetic Particle Testing
- Liquid Penetrant Testing
- Radiography Testing
- Ultrasonic Testing
- Electromagnetic Testing
- Laser Testing
- Leak Testing
- Borescope Testing
- Chemical & Mechanical Properties Testing
- Surface Finish Testing
- Hard chrome plating thickness Testing
- Peel off/ Bend Test
- Ferroxy Testing





The demand for reconditioning of marine components is at its zenith in India owing to the large population of ships and growth in volume of traffic at major ports. This was identified as one of the earliest business opportunities and hence reconditioning of marine components as garnered and strength in this area intensified. The main engine parts are relatively expensive and engine components in 2 stroke and 4 stroke engine wear down with time. Most often the components reconditioned at United Van Der Horst are as good as original components. Some of our esteemed satisfied customers are Mumbai Port Trust, SCI Mumbai, SCI Kolkata, Jindal Drilling & Industries Ltd., Seaways Shipping Ltd., Bharati Shipyard Ltd., ABG Shipyard Ltd. Murmu Goa Port Trust, South-West Port Ltd., Greatship India Ltd., Man Diesel India Ltd., Ethiopian Shipping Lines, Jindal Waterways, Swift Marine Service etc.



#### **Piston Crowns :**

United Van Der Horst has successfully combined specialized welding technology and Hard Chrome plating techniques for the complete reconditioning of damaged or worn Piston Crowns. All ring grooves are rebuilt to standard size, top and bottom faces of grooves are chrome plated to reduce wear. The entire procedure are approved by classification societies like IRS, DNV, BV, Lloyds.



#### **Cylinder Covers :**

All burnt areas in the combustion bowl and internal cracks are successfully rebuilt by machining out worn-out / damaged areas prior to weld build up. DP checks are carried out intermittently all through the process of reconditioning. The latest modification are implemented as per manufacture's recommendation. Third party inspection and certification is carried out by agencies like IRS, BV, DNV, Lloyds etc.



#### **Exhaust Valves Spindles :**

All worn-out / damaged base material is removed up to sound metal by machining. The value is then welded by compatible electrodes and inlaid with stellite and machined to original dimensions and profiles. Steam is built up to standard dimensions by Hard Chrome plating, if required.



#### **Exhaust Valve Seats :**

These are reconditioned by removal of worn-out / damaged portions are pre machined up to sound metal. NDT checks are performed prior to weld built up. Inlay of stellite on valve seat area and finish machining followed by lapping and blue matching with respective valve spindle is done to ensure minimum 70% contact area.



#### **Exhaust Valve Housing / Cage :**

Specialized Welding Techniques and consumables are employed to re-generate all areas which are eroded, worn out (especially around valve guide bush) and any other locations. Cooling water chambers are cleaned and tested at 7 bar pressure.



#### **Cylinder Heads :**

All burnt areas in the combustion bowl and internal cracks are successfully rebuilt by machining worn-out / damaged areas prior to weld build up. DP checks are carried out intermittently all through the process of reconditioning. The latest modification are implemented as per manufacture's recommendation. Third party inspection and certification is carried out by agencies like IRS, BV, DNV, Lloyds etc.



#### **Pumps :**

Overhauling, re-conditioning, replacement of parts including mechanical seal, impeller etc. Erection and testing of all types of pumps such as fire pumps, main sea water pumps, auxiliary sea water pumps etc. Modified or OEM Seals with latest technology and with different sealing profiles are available.



#### **Connecting Rods :**

Connecting rods of all types of auxiliary engines are re-conditioned by lapping the mating faces (serrations) to over 95% contact surface and re-machining the bore to maintain circularity of crank-pin bearing bore within 10 micron.



#### **Liners :**

United Van Der Horst has the capacity to reconditioned Liners by the well known patented "Porous Krome" plating process to bring back to the liners to its original dimensions. This patented process regulates porosity which is similar to newly manufactured cast iron liners with added advantage of wear resistance surface (60 HRC). These pore forms are the anchoring points for oil retention in the liner which helps in maintaining a fluid film.



#### **Crankshaft:**

Re conditioning of crank shaft up to 10 meters long with a swing over a diameter of 12 meters. Repairing of crank pins and main Journals by juxtaposing the grinding process. Services for crank shaft also includes straightening of crankshaft by peening method, full dimensional inspection in addition with magnaflux crack detection. The entire procedure are approved by classification societies like IRS, DNV, BV, Lloyds. Inspection of final product is witnessed and certified by the respective classification society.



#### **Hydraulic Cylinders :**

Cylinders are manufactured / reconditioned, inspected and tested in accordance with ISO 10100-2001 Hydraulic fluid power Cylinders Acceptance tests. Modified seals with latest technology and with modified sealing profiles. Special fittings tools can also be supplied to prevent damage to the seals while installation and for ease of fitment. The cylinders are coated with special anti corrosive epoxy paints or suitable surface treatments is carried out based on environment of service.



#### **Propeller Shaft :**

Friedrich Schmaltz German Make cylindrical grinding machine, with CNC controlled cylindrical grinding facility is used to grind bearing diameters of propeller shaft with length in excess to 12 meters can easily be ground.



**Propeller Blades :**

Weld build up broken / damaged propeller blade with compatible electrode with proper welding procedure, grinding and matching of profile. Inspection by certification societies like IRS, BV, DNV, GL etc.

**Rudder Stock :**

Rudder stock is a part of Rudder system of Ships for directional control. Repair scope includes rectification of damaged / pitted surface or rudder stock as per approved WPS (Welding Procedure Specification) form DNV / Approved certifying authority for the respective ship. High stress concentrated areas shall be taken into consideration during welding.

**Turbo Charger Casings :**

Eroded / Worn Casting (thin walled) or even cracked ones of the turbo charges casing can be effectively repaired by the Cold / Fusion method. All turbo charger casings are hydro tested in house and certified by the certifying authority.

**Piston Rods :**

Piston rods of all types of main engine are first ground to remove deep scores and DP tested. The rods are then hard chrome plate to standard size and certified by class as required.

## Port Trust Equipments

**A) Bucket Wheel Assemblies :**

Re-generation of splines (after having completely machined the splines to the root dia) gears, shaft, etc and testing of the complete unit.

**B) Reach Stackers :**

Re-conditioning of lift cylinders, steering cylinders, boom cylinders and load testing of equipment including power pack. Seals with latest technology and with modified sealing profiles are available.

**C) Cyclo Drive :**

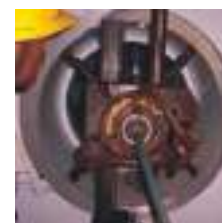
Re-conditioning of gears and shafts by the hard chrome plating technique, replacement or overhauling with other internal parts including testing of equipment.

**D) Dry dock gates :**

Repair of manifolds, hydraulic cylinders both tube and rod by hard chrome plating and honing, end caps, providing cathodic protection for the lock / sluice gates. Modified or OEM seals with latest technology and sealing profiles are available.

**E) Cranes :**

Reconditioning of hydraulic cylinders, swivel gear, boom etc. by qualified welding procedures, testing etc. Modified or OEM seals with latest technology and sealing profiles are available.

**In-situ machine :**

Machining of bores, face and grooves of flanges, hatches, man holes etc. can be carried out with our special equipments and skilled staff at the customers end wherever required.





Oil field equipments have historically been complex pieces of engineering requiring many special steps for repair and reconditioning. The ability to repair rather than replace critical platforms and drilling equipment components is an economical option for an oilfield operation. All repaired / reconditioned components, however meet international standards to improve operations, safety and environment performance. United Van Der Horst has the best repair and reconditioning facility for oilfield equipment and therefore the company has awarded API 6A certification in 2002 and renewed in 2010 under license no 6A 0585 with due consideration of current market scenario the company also registered for API Spec. Q1 (Registration No. Q1-0856) ISO / TS29001 (Registration No. 1062) in March 2010. The scope of this registration applies to Design, Manufacture and Re-manufacture of Hydraulic and Pneumatic Cylinders, Manufacture and Re-manufacture of Connectors and Ring Gasket for Wellhead and Christmas Tree Equipment. Re-manufacture of Ram BOP and Annular BOP for the Oil and Gas Industry. This certificate issued by American Petroleum Institute ensures our commitment to modern quality systems, sound engineering and operating practices. All welding and plating process meet the relevant API specifications or OEM recommendations and are carried out by qualified people under constant supervision. Some of our esteemed satisfied customers are ABAN Off-Shore Ltd., Transocean Discover, Jagson International Ltd. Sundowner Off Shore International Ltd. Great Off-Shore Ltd., Can Off-Shore Pvt. Ltd., Oil India Ltd., Bharat Petroleum Corporation Ltd., Hercules International Drilling Ltd., B. G. Exploration & Production India Ltd., Fuji Technical Services Pvt. Ltd. etc.



#### **Blow Out Preventers :**

Complete servicing and reconditioning of all types of BOPs i.e. Ram BOP, Annular BOP, IBOP. The scope includes repair of API ring grooves with SS inlay, re building of piston, body, cover, stress relieving with chart recorder and complete NDT tests are carried out during the reconditioning process. Assembly of BOPs with new seals of existing design and profile from Indigenous / OEM Make. Testing and approved by OEM / third party inspection like ABS, BV, GL etc.



#### **Diesel Engine Components :**

United Van Der Horst has successfully combined specialized welding technology and hard chrome plating technology for the complete reconditioning of damaged or worn out components of diesel engines such as a) Crankshafts b) Liners c) Cylinder Heads d) Exhaust Valves e) Connecting Rods f) Pistons g) Engine Blocks (Crank cases). Hard chrome plating of ring grooves of piston crown for better sealing and wear resistance, porous chrome of engine liners for improved lubrication, Stellite inlay on seating face of valve seat and valve spindle for wear resistance, straightening of crankshaft and maintaining the bearing diameters to its original dimensions by hard chrome plating. The entire procedure are approved by classification societies like IRS, DNV, BV, Lloyds.



#### **Skidding Gear Box :**

Repairing includes dismantling of Gear box from RIG, Replacement of damaged roller bearings, Modification of Oil seal, Repair of damage base plate, Installation of gear box back into RIG.



#### **Mud Pumps Modules :**

Repair of sealing surface by machining worn out / damage areas and weld build up by compatible weld electrodes, stress relieving, final machining, repair of thread holes etc. Inspection by classification societies like IRS, DNV, Lloyds, BV, GL etc.



#### **Bull Gear Shaft Assemblies :**

The procedure includes testing of material weld build up of broken teeth with compatible electrodes, profile matching of teeth. The shaft diameters and the bearing and the sealing areas are re built back to standard diameter by the hard chrome plating and grinding process. Modified or OEM Rotary Shaft Seals with latest technology and with different sealing profiles are available.



#### **Crankshaft :**

Re-conditioning of crank shaft up to 10 meters long with a swing over a diameter of 1.2 meters. Repairing of crankpins and main Journals by juxtaposing the grinding process. Services for crank shaft also includes straightening of crankshaft by peening method, full dimensional inspection in addition with magnaflux crack detection. The entire procedure are approved by classification societies like IRS, DNV, BV, Lloyds. Inspection of final product is witnessed and certified by the respective classification society.



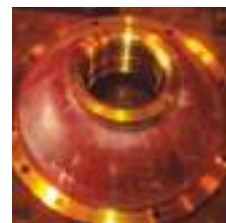
#### **BOP :**

Dismantling of I-Bop will specially designed fixture, replacement of damaged ball valve parts & seals Re-assembling & testing at required pressure.



#### **Pinion :**

Pinion is a part of Rack Pinion system of Mechanical Jack-up rig, repair includes machining out the damaged bearing diameter on both NDE (Non Drive End) & DE (Drive End). Weld build up with compatible weld electrode, Stress relieving, Finish machining & grinding of bearing diameters to maintain the tolerance as per requirement. All inspections are carried out under ABS supervision.



#### **Hub in Board / Hub Out board :**

Hubs are part of Rack Pinion system of Mechanical Jack Up rig, repair includes machining out the damaged bearing diameter on both NDE (non drive end) & DE (drive end) Weld build up with ABS Huston (USA) approved Aluminum Bronze Cladding on bearing diameters. Finish machining & Honing of bearing diameters to maintain the tolerance as per requirement. All inspections are carried out under ABS supervision.



#### **Compressors :**

Facilities for overhauling of various types of compressors like HVAC, HP, Gas compressors etc. Both in plant and at site options are available. Modified or OEM seals with latest technology and sealing profiles are available.



#### **Rotor Shaft :**

It is a life line of oil drilling rigs which provides rotation power to the drilling Head / tool. Repair scope includes hard chrome plating of helical flutes which provides wear resistance surface. Surface hardness of chrome plated surface shall be minimum 65 HRC & Surface finish value less than Ra 0.3 microns. Deep dents marks / Pitting marks shall be locally repaired before hard chrome plating.



**Column Pipes :**

Repair of pipe bore by welding, machining of flange faces, repair of 'O' ring grooves, repair of centralizer grooves, pressure testing up to 21,000 PSI and preservative coating.

**Actuators :**

Actuators are manufactured / reconditioned, inspected and tested in accordance with ISO 10100-2001 Hydraulic fluid power Actuators Acceptances tests. Modified seals with latest technology and with modified sealing profiles are available. The actuators are coated with special anti-corrosive epoxy paints or suitable surface treatments is carried out based on environment of service.

**Hydraulic Cylinders :**

Cylinders are manufactured / reconditioned, inspected and tested in accordance with ISO 10100 : 2001 Hydraulic fluid power Cylinders Acceptance tests. We can manufacture / reconditioned cylinders for oil field application like Jacking, Wedging, Skidding, Cantilever, Gimble cylinders etc. Modified or OEM seals with latest technology and with modified sealing profiles are available. Special fittings tools can also be supplied to prevent damage to the seals while installation and for ease of fitment.

**Riser Pipes :**

Renewal of joints, repair of ring grooves as per API procedure by pre-machining, welding of SS buffer lay, SS inlay, stress relieving, finish machining, DP tests and pressure testing up to 21,000 PSI.

**Burner Booms :**

Repair / renewal of structures, railings, valves etc and pressure testing of gas, water and oil lines.

**Pumps :**

Overhauling of various pumps like glycol recalcitrating pumps, condensate coil pump, fire water pump, booster pumps, lube oil pumps, vacuum pumps, etc. Modified or OEM seals with latest technology and with different sealing profiles are available.

**Drilling Jar :**

Repair includes pre-honing of sealing diameter. UT check on whole body, Hardness check & Hard chrome plating to achieve the required size.

**Well Control Head :**

Repairing of gates, seats, seats pockets, mono block body, threaded holes, renewal of sealing elements and pressure testing up to 21,000 PSI. Modified or OEM seals with latest technology and with different sealing profiles are available.

**Top Drives :**

Repair of cylinders, rods, gears, replacement of seals and other fitments, pressure testing etc. as per OEM requirements. Modified or OEM seals with latest technology and sealing profiles are available.

**Services at sites :**

In situ machining and welding of flanges, hatches, man holes etc. overhauling of compressors, engines etc. dismantling and erection of equipments.





Wear is an insidious problem, which makes every equipment or individual components useless after only a very little amount of irregularities occurred while the equipment is in operation. This however, reduces the life of any equipment or component, which results in replacement of the damage components with new components causing the firm to invest considerable amount. With application of various wear resistance coating and treatment techniques, the worn out components can be repaired and reconditioned in a very low amount of cost. The method employed for the reduction of wear falls into two categories surface treatment and coating processes. United Van Der Horst, has over the years mastered specialized welding process such as Manual Metal Arc, Open Arc and Submerged Arc and patented chrome plating techniques. This has made it possible for all the rail, marine, power generation, chemical, cement, oil, gas and other industries to reclaim countless worn and scored parts at substantial saving over the cost of new replacement parts. Some of our esteemed customer are JSW Bellary, JSL Hissar, JSL Orissa, TATA steel, Ispat Dolvi, SAIL Bokaro, Sail Rourkela, Salem Steel plant, Welspun anjar, Essar Hazira, Ambuja Cements, Danieli Wean, United, JSW Vasind, Ordinance Factory Ambernath, Qtar Steel, Siemens Ltd. Energy Services, Gateway Terminal India Pvt. Ltd., Ultra Tech Cement, Narmada Gelatine Ltd., Timken Ltd., Bhushan Steel, Thyseenkup Electricals, Lloyds Steel Warhda, Indo Gulf Fertilizers, Deepak Fertilizers, Indian Railways, Hanil Era, Perlite Liners, Reliance Industries Ltd., Kellogs India Pvt. Ltd., Binani Cements, Hindalco, Jain Irrigation etc.



#### Work Roll & Back-up roll Chocks :

With 15 T positioner, 8m3 volume stress relieving capacity & expertise in wide range of welding made United Van Der Horst ideal for repair of Roll Chocks. Repair includes reconditioning of Bearing diameter by welding machining followed by grinding process to maintain the required size & surface finish, maintaining parallelism of liner faces. Repair of grease lines, Repair / Modification of Bending cylinders with New sealing design.



#### Roll Bending Block (MAE-WEST Block) :

Repair includes repair of cylinder bore by welding machining & grinding process. Hard chrome plating of piston rods, Replacement / Modification of sealing system, Rectification of Oil paths / Drills Re-chasing / Re-Tapping of threaded holes, Maintaining parallelism of liner faces. Load testing facility up to 250 T capacity. United Van Der Horst has also manufactured new design roll bending blocks with I.D. hard chrome plated and ground surface finish along with Low friction sealing design.



#### AGC Cylinder (Automated Gauge Controlled) :

Repair includes Hard chrome plating of cylinder barrel internal diameter to bring back its original dimension and tolerance with required surface finish. Hard chrome plating of Piston rod. Replacement / Modification of sealing arrangement with New design. Replacement / Modification of position transducer, Torque tightening capacity up to 25000N-m, NAS 3 level Servo 46 oil is used for testing.



#### Work Rolls :

Depending on application these are reconditioned by weld build up (based on chemistry of base metal) and/or are hard chrome plated. Super finishing is carried out wherever required. Various rolls such as back up rolls, tube rollers, oiling drums, embossing rollers, inking rollers, pinch roll and other rolls of aluminum from steel, paper, textile, aluminum, food, edible oil and other processing industries are reconditioned to their required size and profile.



#### King Pin :

is a critical component of Wind Mill. United Van Der Horst has successfully developed a plating procedure for the special grade Nodular Cast iron material. Plating has been tested under third party inspection by TATA PROJECTS for peel off test at 90° bend and Hardness achieved on these surface is min 65 HRC. Kingpin are ground with concentricity within 10 microns and perpendicularity within 20 microns.



#### Drive Spindle Head (Wobbler) :

Repair includes removal of Fatigue cracks from liner faces, NDT check, weld build up with Hard face electrode, stress, relieving & Finish machining to required size, Parallelity with liner faces are maintained with 0.03 mm (30 microns)



#### Hydro Tester :

Hydro Tester assembly is a hydraulically operated Gate valve assembly used in hydro testing of high pressure pipe line. United Van Der Horst has successfully designed & supplied Hydro Tester of pressure rating 400 bar working pressure with efficient 150 bar pressure working Hydraulic cylinder assembly. An efficient Metal-Metal sealing surface provides maximum pressure drop of less than 2% at 30 minutes hold time.

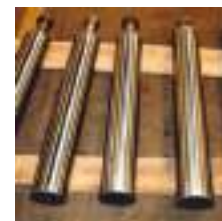


#### Hydraulic Cylinders :

Cylinders are manufactured / reconditioned, inspected and tested in accordance with ISO 10100:2001 Hydraulic, fluid power Cylinders Acceptance tests. United Van Der Horst offers complete solutions including custom made new cylinders and reconditioning of worn out damaged cylinders for all industrial application in Steel, Cement, Pharmaceutical, Automobile Material Handling, Earth Moving, Aluminum, Power Plants, Food Processing, Injection Moulding Machines, Mining etc. A few prestigious Hydraulic cylinders developed for steel industries would be Roll Force Cylinders / Screw Down Cylinders (AGC). Back up Roll bending and balancing cylinders etc. with sealing solutions considering lengths and strength of bearing elements, suitable wiping elements to eliminate and kind of contamination. A complete package for the hydraulic system can be provided by United Van Der Horst today. Modified seals or OEM seals and Hoses with latest technology and sealing profiles from reputed manufacturers are also available.



Special fitting tools also can be supplied to prevent damage to the seals while installation and for ease of fitment. The Cylinders are coated with anti- corrosive epoxy paints or suitable surface treatments is carried out based on environment of service.



#### Plungers :

All kinds of plungers from various industries are repaired and reconditioned at our site using grinding and hard chrome plating technique. These are maintained to their original shapes and sizes.



#### Ammonia Compressor Body :

A critical component of compressor body is its "cylinder liner", repair scope includes collapsing of Old cast iron liner & Shrink fitting of New cast iron liner. Honing of liner bore to get the required surface finish & tolerance.



#### Rotary Union :

A Critical equipment used for supply of oil / water at pressure for rotating parts specially for Hydraulic cylinder in Rolling mills, CNC Head stock, Repair scope includes repair of sealing diameters by Hard chrome plating, replacement of damaged bearings, Modification of sealing arrangement / replacement of seals. Testing of rotary joint at actual working conditions at given RPM.





#### **Gears :**

The procedure includes testing of material weld build up of broken teeth with compatible electrodes, profile matching of teeth and also replacement of heavily damaged gears those which are beyond repair. Repair and reconditioning of shaft diameters at bearing and sealing areas by weld build up hard chrome plating and grinding process and bring the size to its original diameter.



#### **Diesel Engine Components :**

United Van Der Horst has successfully combined specialized welding technology and hard chrome plating technology for the complete reconditioning of damaged or worn out components of diesel engines such as a) Crankshafts b) Liners c) Cylinder Heads d) Exhaust Valves e) Connecting Rods f) Pistons g) Engine Blocks (Crank cases). Hard chrome plating of ring grooves of piston crown for better sealing and were resistance, porous chrome of engine liners for improved lubrication, stellite inlay on seating face of valve seat and valve spindle for wear resistance, straightening of crankshaft and maintaining the bearing diameters to its original dimensions by hard chrome plating. The entire procedure are approved by classification societies like IRS, DNV, BV, Lloyds.



#### **Screw Conveyor :**

It is used in processing industries as a short distance conveyor. Repair includes re-sizing of flutes diameter by machining followed by grinding to maintain the required size and tolerance. Repair of Bearing diameters by Hard chrome plating. Dimensional accuracy of 0.1 mm can be easily achievable for flutes & 0.01 mm for bearing diameters.



#### **Pinion Shaft :**

A large variety of pinion shaft used in drive mechanism usually discarded due to damaged or worn out bearing diameters. At United Van Der Horst we combined our best expertise of welding & Hard chrome plating to get damaged portions back to their original size & tolerance.



#### **Inner Bell :**

A large diameter vacuum cup used in Heat treatment plants for Normalizing / Annealing process at negative pressure (vacuum). Repair scope includes re-welding of all weld joints after entire NDT check. Re-profiling of corrugate surface. Painting of both external & internal surface with heat resistance painting.



#### **Mandrels :**

Mandrels for water treatment plant can be repaired and re conditioned by hard chrome plating and finish grinding on CNC cylindrical grinding machine to desired surface requirements. Mandrels as long as 12 meters and diameter up to 800 mm of can be re-conditioned.



#### **Turbo Chargers Rotors :**

Repair of shafts by grinding chrome plating and bringing back to standard size, dynamic balancing etc (including Ash Blasting wherever necessary)



#### **Compressors :**

Facilities for overhauling of various types of compressors like HVAC, HP, Gas Compressors, etc both at our works and at customer site of Ingersoll Rand and Dresser Rand have been successfully carried out.



#### **Pneumatic Cylinders :**

Pneumatic cylinders tested in accordance with ISO 10099 : 2001 Pneumatic cylinder final examination and acceptance. United Van Der Horst offers custom made cylinders and reconditioning services for all type of single acting, double acting, hydro-pneumatic cylinders for industrial applications like Counter balance Cylinder, Cushion cylinder, Special purpose machine, CNC machine, etc. in diverse field as Paper industry, automobile industry, steel plant, non ferrous metal plant as aluminum, copper, power plants food processing etc. modified seals with latest technology and sealing profiles are available. The cylinders are suitable for dry air, lubricated air, various types of gases and media as specified by the customer. The cylinders are suitable for a service temperature of -20°C to 315°C.



#### **Tie Bar :**

It is a parts of Extrusion press / Forging Press subjected to heavy Tensile & Fatigue loading. Repair scope includes joining of broken tie bars of size 500 mm diameter & length in excess to 1000 meters by welding & then Finish machining as per requirements.



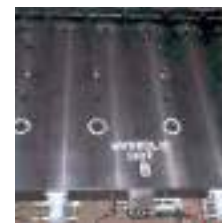
#### **Screw Down Shaft :**

Used in rolling mills for gap adjustment between the roll & is subjected heavy fatigue loading. Repair scope includes repair of damaged threads, refurbishment of damaged bearing diameters by hard chrome plating.



#### **Calibrator Plate :**

It is a molding plate used in manufacturing of light weight building materials. These plates requires a hard chrome plated and mirror finish surface. United Van Der Horst has supplied calibrator plate with surface finish value of Ra < 0.2 microns & surface hardness min 65 HRC.



#### **Moulds :**

Grinding of worn out areas weld build up with compatible electrodes, stress relieving, grinding and profile matching.





## **Crankshaft:**

Re-conditioning of crank shaft up to 10 meters long with a swing over a diameter of 1.2 meters. Repairing of crank pins and main Journals by juxtaposing the grinding process. Services for crank shaft also includes straightening of crankshaft by peening method, full dimensional inspection in addition with magnaflux crack detection. Inspection of final product is witnessed and certified by the respective classification society.



## **Buffer Cylinder:**

Used as a damping mechanism for Over Head / Open Yard Cranes. Repair scope includes Hard chrome plating of Cylinder Barrel & Piston rod, Modification of sealing arrangements which are compatible with Nitrogen Gas & Hydraulic oil, Filling of Nitrogen gas at one side of the cylinder assembly & Load testing same as per customer requirements.



## **Actuators:**

Actuators are manufactured / reconditioned, inspected and tested in accordance with "ISO 10100:2001 Hydraulic fluid power Actuators Acceptance tests".



## **Screw Compressor:**

Reconditioning of internal diameters of both side bearing housing body by machining followed by weld build up and finally finish machining to its original shape and size. Journal Bearing diameter of both the male and female screws are repaired and re conditioned by hard chrome plating and grinding process to get the required surface finish & tolerance. Replacement of damaged bearings. Rectification of lubrication lines.



## **Wind Mill Rotor:**

It is part of Wind Mills power generation system. Manufacturing scope includes fabrication complete Rotor from raw material to finish product which includes fabrication of Fins, Hard chrome plating of bearing diameters.



## **Pellet Mill Roll:**

A stainless steel roll used in food processing industries repair scope includes refurbishment of bearing diameters.



## **Valves:**

Re-conditioning of all gate valves, Ball valves, Globe valves, etc., Renewal of all gaskets, seals etc and repair of seats, gates, pressure testing of valves to test pressure as per API or other class requirements.



## **Hubs:**

Removal of old sleeves, fabrication of new sleeves, machining, shrink fitting of new sleeves, machining and honing of ID to required size. Hubs used in cement, fertilizer and other industries are reconditioned.



## **Supply of spares and servicing of Yanmar engines:**

United Van Der Horst is the authorized representative for supply of Yanmar Engine, spare and servicing of engine.





# HYDRAULIC/PNEUMATIC CYLINDERS & ACCESSORIES

United Van Der Horst manufactures and reconditions Hydraulic Cylinders by using our patented hard chrome processes. The Cylinder parts hard chrome plated at United Van Der Horst has minimum surface hardness of 65 HRC and has passed salt bath test & peel off test at NABL approved laboratory under ABS supervision. This unique property helps in providing a wear resistant & super finish are constantly striving to enforce and improve our quality standards since customers demand the highest quality to complete in their highly competitive markets and thereby gain a competitive edge on their competitors. United Van Der Horst Ltd. Offers the widest range of Hydraulic Cylinders for service in Oil Field, Marine, Aluminum, Steel plants, Cement plants, Special Purpose Machines (SPM), Material handling equipments, Industrial application and Earth moving equipment. Some of our esteemed customer are JSW Bellary, JSL Hissar, JSL Orissa, TATA Steel, Ispat Dolvi, SAIL Bokaro, Sail Rourkela, Salem Steel plant, Welspun Anjar, Essar Hazira, Ambuja Cements, Danieli Wean United, JSW Vasind, Ordnance Factory Ambernath, Bhushan Steel etc.



## Hydraulic Cylinders :

United Van Der Horst offers technical assistance in selecting cylinder design to suit custom requirements. The cylinders are manufactured as per ISO standards and custom build cylinders. United Van Der Horst has manufactured bore diameter up to 700 mm and stroke up to 10 meters and has manufacturing capacity of bore diameter up to 1200mm. The rods are hardened as per the customer applications and chrome plated with surface hardness up to 65 HRC. The cylinder barrel is honed, and hard chrome plated on request.



The Hydraulic cylinders are designed for light duty and heavy duty applications involving pressure rating up to 60 Mpa (600 Bar). United Van Der Horst offers special cylinders such as telescopic cylinders, suspension cylinder, double rod cylinders, tandem cylinders, roll force cylinders (AGC cylinders) and other Special fitting tools can be supplied to prevent damage to the seals while installation and for ease of fitment.



The cylinders can be supplied in Tie Rod Design, Mill type Design and Custom Design. As per the requirements wide range of ISO standard mounting styles such as Clevis mounted, Trunion mounted, Flange mounted, Foot mounted, Extended Tie rod mounted cylinders are manufactured in more than 200 Designs. A combinations of mountings with locations as per customer requirements is available. United Van Der Horst specializes in designing and manufacturing custom made cylinders for all critical applications.

All hydraulic cylinder are manufactured, reconditioned and tested in accordance with ISO 10100:2001 Hydraulic Fluid Power Cylinders Acceptance test. Old cylinder with worn out barrels or damaged piston rods can also be reconditioned. Modified or OEM seals with latest technology and sealing profiles are available.



Depending upon the application and environment material such as ASTM A 106 Grade B, ST45/42, ST 52, Forged EN 9, EN 24, EN 19, SS 304, SS 316 and SS 310 shall be used for cylinder barrel & for piston rods EN 8, EN 9, SS 304, SS 316, SS 310 are used. Based on the application, non ferrous and special grades of steels can be also be supplied. The cylinders are suitable for temperature range from -20°C to 200°C the cylinder material is carefully selected and suitably treated for harsh environments as saline or corrosive atmosphere (acidic or basic).



United Van Der Horst cylinders can be used with mineral based hydraulic fluids, water based emulsions, synthetic fire resistant fluids and all customer specified media.



## Pneumatic Cylinders :

Pneumatic cylinders are manufactured and reconditioned and tested in accordance with ISO 10099 :2001 Pneumatic Cylinder final inspection and acceptance. United Van Der Horst supplies custom made pneumatic cylinder for SPM, Steel Mills, Marine applications, Press shops, paper mills, Aluminum industry and others. United Van Der Horst offers single acting, double acting cylinders, hydro pneumatic cylinders with tie rod design and clevis, trunnion, lug and flange type mountings, Special ports and port position can be supplied. United Van Der Horst offers technical assistance in selecting cylinder design to suit customer requirements. The cylinder are manufactured as per ISO and other standards. The maximum bore diameter can be up to 800mm bore and stroke as per requirements. Modified or OEM seals with latest technology and sealing profile are available. The cylinder barrel can be supplied in non ferrous materials as brass, copper, aluminum and steel tubes like ASTM A 106, Grade B, SS 04, SS 306, SS 316, Ss 310 the barrel is honed and flashed chrome plated. For rods EN 8, EN 9, EN 19, SS 316, SS 310 are used. The media can be dry air, lubricated air or gases. The operating temperature range is -20°C to 200°C pressure up to 30 bars. Special cylinder design such as twin rod can also be supplied. Special fitting tools can be supplied to prevent damage to the seals while installation and for ease of fitment.



## Accessories



### Hydraulic Seals :

Modified or OEM seals with latest technology and sealing profile are available. Seals can be supplied for hydraulic equipments such as cylinders actuators, pumps, direction control valves, jacks, industrial cylinders and other equipments. The seals can be supplied for non standard as well as standard design and dimensions suitable for temperature up to 315°C and pressure up to 1100 Bar. Special Fitting tools can be supplied to prevent damage to the seals while installation and for ease of fitment.



### Pneumatic Seals :

Modified or OEM seals with latest technology and sealing profile are available. Seal kits consisting of Piston Seals, Rod Seals, Cushion Seals, O Rings, Wiper Seals, Guide Rings, etc can be supplied for pneumatic equipment as cylinder, clamping devices, hydro pneumatic cylinders and other equipments suitable for temperatures up to 315°C. Special fitting tools can be supplied to prevent damage to the seals while installation and for ease of fitment.



### Hydraulic and Pneumatic Coupling :

Supply of all kind of hydraulic and pneumatic fittings from reputed manufacture up to 700 Bar capacity.



# ACCESSORIES



## Telescopic cylinder :

United Van Der Horst has successfully developed work procedure for hard chrome plating of thin walled section telescopic cylinder's Barrel & Rod. Grinding of thin walled section tubes requires special care to avoid Bulging / Uneven grinding. Wide range of custom designed fixtures made us possible deliver the goods at right quality & time. Modified / OEM make seals are also offered as per customer requirement.



## Coil Buggy Cylinder :

It is used in Rolling Mills for Handling Rolled oils of 25 to 30 Ton. Most parts of coil buggy cylinders are Cast iron. Repair scope includes replacement of Pressure Stamp Hard Chrome plating of sliding sealing surface, Replacement of Seals with OEM make. Pressure testing of cylinder assembly at the required pressure.



## AGC Cylinder (Automated Gauge Controlled) :

Repair includes Hard chrome plating of cylinder barrel internal diameter to bring back its original dimension and tolerance with required surface finish. Hard chrome plating or Piston rod, Replacement / Modification sealing arrangement with new design. Replacement / Modification of position transducer, Torque tightening capacity up to 25,000 N-m, NAS 3 level Servo 46 oil is used for testing.



## Rock Breaker Cylinder :

It is used as a Crusher cylinder in Cement plants. Repair scop includes Parting of cylinder barrel & end cover for hard chrome plating. Hard chrome plating of cylinder barrel & piston rod. Replacement of seals with Modified / OEM make. Load testing of cylinder assembly at required pressure (<350 Tonne).



## Jacking Cylinder :

United Van Der Horst has successfully completed 24 quantity of jacking cylinder assembly for RIG Sagar Samrat of ONGC drilling. Repair scope includes removal, repair & installation of cylinder back into RIG after repair. Also includes Hard chrome plating of cylinder barrel diameter 555 x Length Appx 300mm. Hard chrome plating of piston rod diameter 444.5 x Length Appx. 3000mm. Replacement of OEM seals, Testing for Load test, Break way pressure test, Intermediate pressure test, Chrome peel of test for Hard chrome plating.



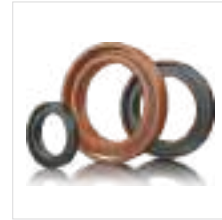
## Buffer Cylinder :

It is used as a damping mechanism for Over Head / Open Yard Cranes. Repair scope includes Hard chrome plating of Cylinder Barrel & Piston rod, Modification of sealing arrangements which are compatible with Nitrogen Gas & Hydraulic Oil, Filling of Nitrogen Gas at one side of the cylinder assembly & Load testing same as per customer requirements.



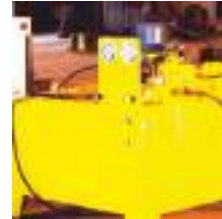
## Thruster Jacking Cylinder :

United Van Der Horst has successfully developed Thruster Jacking cylinder for Drilling Tycoon Transocean. Scope includes Modified Piston head with Phosphorous Bronze Guide, Modified Rod sealing arrangements for easy replacement of seals & to avoid water impregnated.



## Rotary Seals :

Modified or OEM seals with latest technology and sealing profile are available for rotary application like gear boxes, motors, pumps, machine can be supplied for diameters upto 2500mm and shaft speed up to 35 m/sec. Seals are manufacture in different elastomers and thermoplastics as VITON, HNBR, PTFE, PEEK etc among more than 135 different material compounds. Split seals can be supplied to reduce downtime while replacing seals. United Van Der Horst offers seals with special spring designs for optimum contact force for effective sealing which results in lower wear rate and long retention of sealing action.



## Powerpacks :

In our endeavor to offer comprehensive hydraulic solutions we now offer hydraulic power packs, which can be design to suit customer applications. Power packs are suited with reputed brands of AC motors and pumps as per gear pumps, van pumps, disk pumps, reciprocating pumps (multiple pumps) pressure and flow control valves, coolers and heat exchangers with filtration system.



## Control Valves :

United Van Der Horst now offers control valves of reputed manufactures as a part of comprehensive hydraulic cylinder. Based on our experience in the industry we source and also stock all types of valves as directional control valves, flow control valves, pressure control valves, check valves, non return valves and throttling valves etc.



## Accumulators :

United Van Der Horst custom made high capacity accumulators for power plants extrusion processes, press metal forming machines, steel, heavy industry, power mills and other industrial application. The media can be water or hydraulic oil with nitrogen gas. The pressure rating is as per customer requirements.



## Hose Pipes :

Hose pipes available comply with international standards like SAE, DIN, ISO, IS with high tenacity Rayon, HTS and GI material as reinforcements. The hose pipe pass through extensive test such as tensile, oil swelling, ageing, hydrostatic proof pressure test, change in length test, burst pressure test among others and have approval from Refineries Technical Development committee (TDC) Oil Companies, MECON, Central Mining Research Institute, SQA Ministry of Defence, Director General of Mines Safety & RITES (Railways). The hose pipes are suitable for wide range of temperature from -40°F to 200°F the pressure up to 6000 PSI.



## Spider & Coupling :

Rubber or polyurethane spiders are used in couplings to transmit power from motor to gear box. It comes in different variant & sizes. UVDHL offers N-series, P-series, K-series, M-series, T-series & H-series standard variants in this range available stock. Other range like tyre spiders and special spiders are offer on request. UVDHL has three variety of couplings available in its range. Curved jaw couplings, Straight jaw couplings and Tyre couplings. Useful in the industries for light medium and heavy duty power transmission applications.



## Mountings:

UVDHL round mountings are available for easy installation of machines, arrest noise level and vibrations. Adjustable built – up guide helps precise leveling of the machine and keeps it static. UVDHL adjustable mountings are available in 11 models to suit different load bearing capacities. Available in 2 variant Light & Heavy duty.





## CEMENT

- Stackers & Reclaimer
- Bucket Elevators
- Vertical Roller Mills
- Rotary Kiln
- Ball Mill
- Roller Presses



## STEEL MILL

- HAGC Cylinder
- Bending & Balance cylinder
- Work Roll & Backup Roll chock



## TEXTILE INDUSTRY

- Motors
- Spinning



## ENGG. & FABRICATION

- Various types seals and customised solutions are available in this segment. From machine tools to maintenance & overhauling work.



## OIL & GAS

- Extreme Pressure
- Robust working conditions
- Long service life



## POWER PLANT

- Turbines
- Boilers
- Coal Pulveriser
- Roller Journal Assy



## CHEMICAL & FERTILIZER

- Sealing of a coolant compressor with multiple mechanical seals
- PTFE gaskets and tapes



## TYRE INDUSTRY

- Tyre Curing Press
- Bladder Machine



## PUMP MOTOR & GEAR BOX

- High Speed
- High Pressure
- Temperature resistance
- Media resistance
- Operating reliability



## AUTOMOBILE INDUSTRY

- Transmission Gear Box
- Axels
- Shock Absorbers



## HYDRO POWER

- Keplan Turbine Blades
- Wicket Gates
- Servomotors & Navlock Cylinders



## WIND MILL

- Gear Box
- Pitch Cylinder
- Pulse Encoder Seals
- Main Bearing Rotary Seals



## EARTH MOVING INDUSTRY

- Steering Cylinder
- Boom Lifting Cylinder
- Bucket Cylinder
- Telescopic Cylinder
- Axial Grease Seals



## PULP & PAPER

- Pneumatic Valves
- Pneumatic Actuators
- Hydraulic Cylinders
- Pneumatic Cylinders
- Calendar Roll Seals



## SUGAR INDUSTRY

- There are numerous rotating equipment which require sealing in sugar industry.



## VALVE INDUSTRY

- Petroleum Line Valves
- Gas Line Valves
- Valve Seat
- Butterfly Valve Seat



## ALUMINIUM INDUSTRY

- Crust Breaker Cylinder
- Point Feeder cylinder
- Tapping Breaker cylinder
- Vacuum seals
- Pneumatic Breaker



## PRESS FORMING INDUSTRY

- Heavy Duty Presses
- Hydraulic Presses
- Mechanical Stamping
- Presses
- Forming Presses



## FOOD & PHARMA

- Food Compliant Material
- Aggressive Fluids – CIP & SIP Process
- High Temperature Solutions in Bakery products



## HYD. & PNEU. CYLINDERS

- All types of single and double acting seals for pressure range start from 0 to 2500 bar.



Win with *UVDHL* ...



UNITED VAN DER HORST LTD.







## MAX GROUP COMPANIES



### MAX SPARE LIMITED

Oil Seal House, A-403,  
Road No. 28, Wagle Estate,  
Thane (W) - 400604. INDIA.  
T : +91-22-2222 5555  
E : sales@maxspare.com  
W : www.maxspare.com



### UNITED VAN DER HORST LIMITED

E-29/30, MIDC Taloja,  
Navi Mumbai - 410208. Maharashtra, INDIA  
T: +91 22 27412728 / 29  
E: sales@uvdhl.com  
W: www.uvdhl.com



### NIRLON V-BELT

Survey No. 50, Hissa No. 1,2,3B/2B,  
Dahivali, Pali Phata, Khopoli, Tal. Khalapur,  
Dist. Raigad, Maharashtra - 410203  
T : +91-22-2222 5555  
E : sales@maxspare.com  
W : www.maxspare.com



### THE RUBBER PRODUCTS LIMITED

C-44, Road No. 28, Wagle Industrial Estate,  
Thane - 400604. Maharashtra, INDIA  
T: +91 22 2222 5555  
E: rpl@rubpro.com  
W: www.rubpro.com