



STEEL & ALUMINUM MILLS

HYTORC®
Since 1968

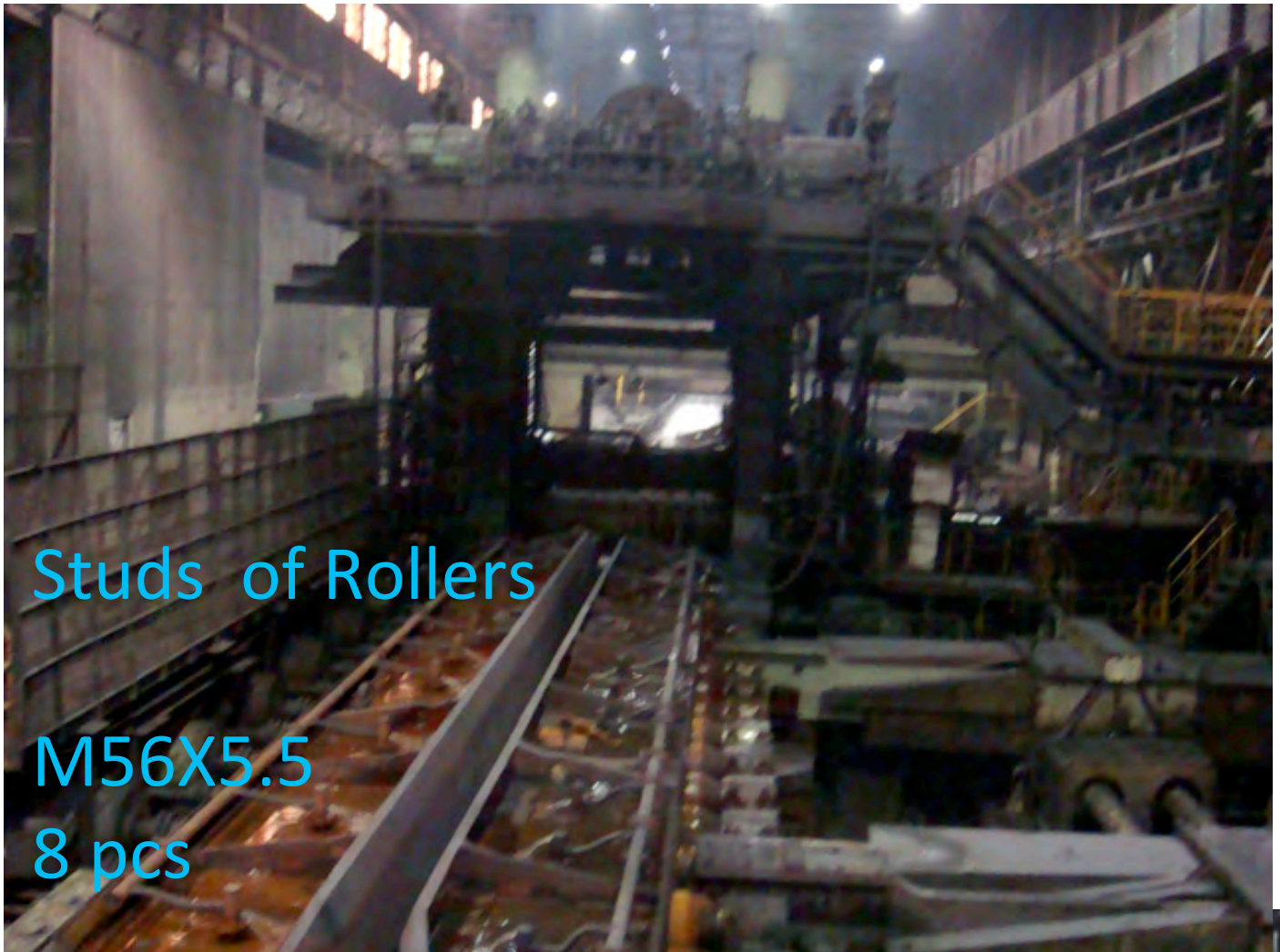
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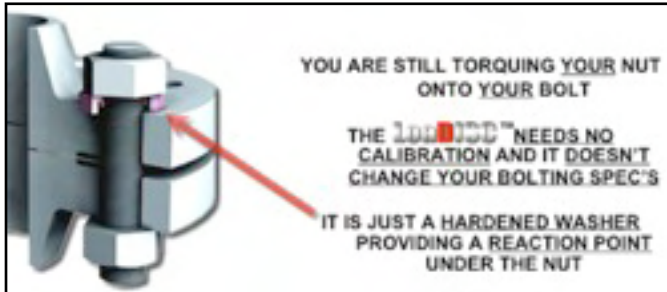




Studs of Rollers

M56X5.5

8 pcs



SAFETY - QUALITY - SCHEDULE

The **ONLY** PROFESSIONALIZED BOLTING COMPANY IN PAKISTAN



BEFORE



Retighten the bolts every 8-20 working hours for nut loosening

AFTER





BAOSTEEL

HYTORC
Since 1968



The counter nut effect remains intact throughout the assembled state of the fastener... *so that despite the use of a low-friction, dry lubricant, **inadvertent nut loosening even under vibration is eliminated.***



YOU ARE STILL TORQUING YOUR NUT
ONTO YOUR BOLT

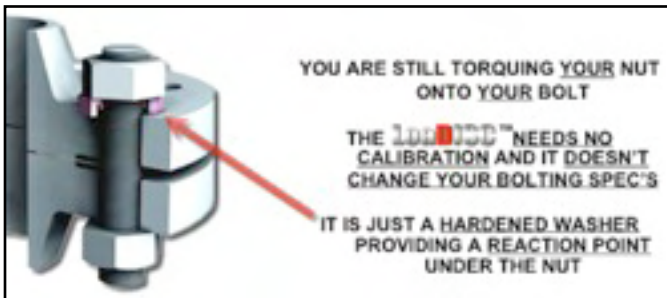
THE **LOAD DISC**™ NEEDS NO
CALIBRATION AND IT DOESN'T
CHANGE YOUR BOLTING SPEC'S

IT IS JUST A HARDENED WASHER
PROVIDING A REACTION POINT
UNDER THE NUT

Bayi Iron & Steel

AFTER

Simultorc Technology
Three Upside And One Downside



SAFETY - QUALITY - SCHEDULE

The **ONLY** PROFESSIONALIZED BOLTING COMPANY IN PAKISTAN

MA'AN SHAN STEEL



DANIELL universal vertical mill

Bolt specification: M100X4; Bolt quantity: 4; @6000NM



The workers used to tighten the bolts with hammers. In this condition, the rolling mill needed to be replaced twice or three times every week and the equipment were often stopped to be overhauled because of bolts loosening.

MA'AN SHAN STEEL



DANIELI vertical roller



MA'AN SHAN STEEL

DANIELI vertical roller

HYTORC
Since 1968



It cost only 1 person 1 minute to tighten a bolt of M100X4 and only 10 minutes to tighten all the bolts on one rolling mill. It saves more than 20 minutes and 3 persons comparing to previous manual tightening. The producing efficiency improves more than 200%.

HYTORC
Since 1968 **CLAMP**™

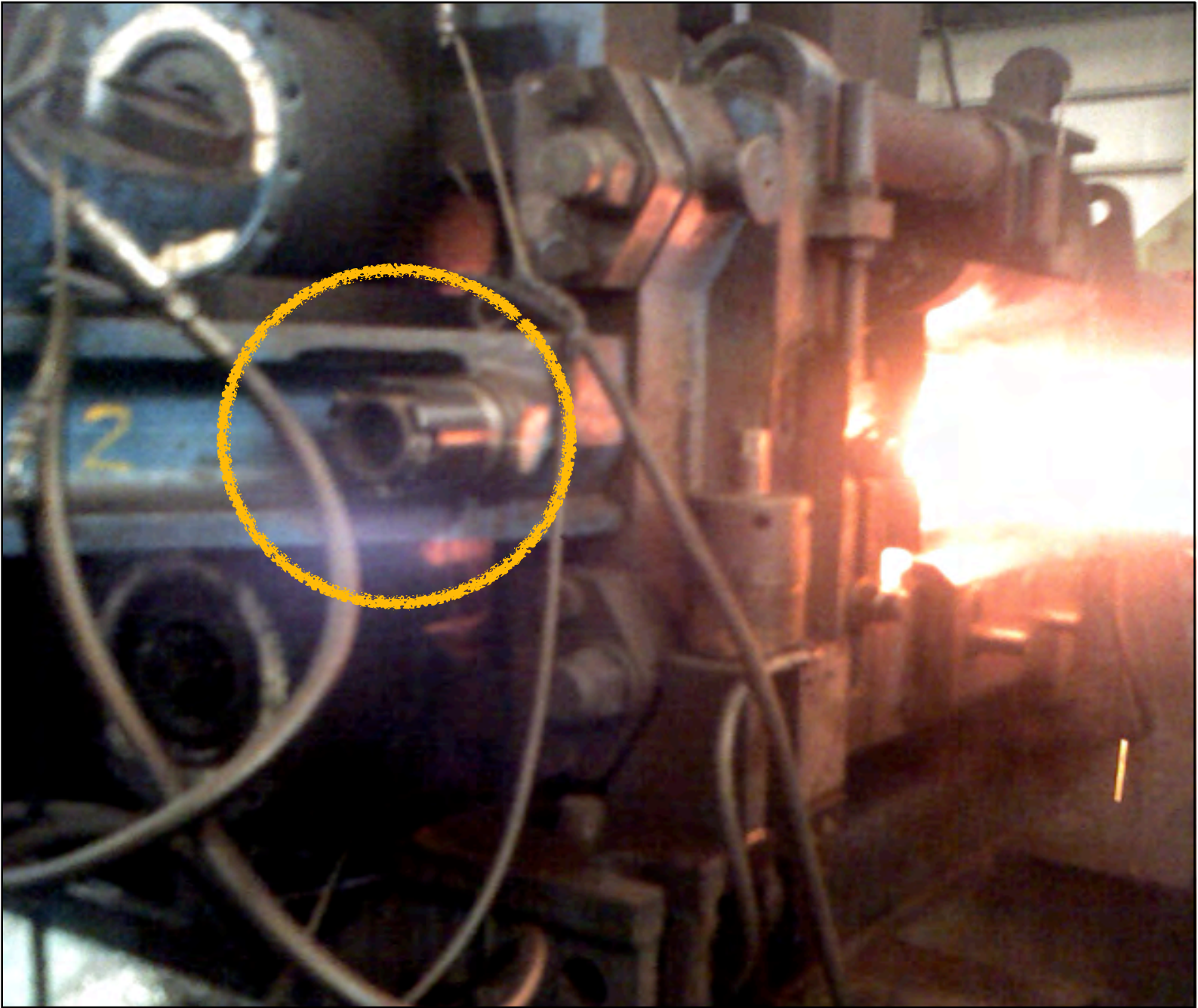
SAFETY - QUALITY - SCHEDULE

Bolting Applications Booklet - Worldwide

MA'AN SHAN STEEL

DANIELI vertical roller

HYTORC[®]
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CLAMP[™]



MACHINE ON

SAFETY - QUALITY - SCHEDULE

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BX STEEL

本溪钢铁（集团）有限责任公司
BENXI IRON & STEEL(GROUP)CO.,LTD.



BENXI IRON & STEEL

**SMS
SIEMAG**

SMS group



SMS SIEMAG

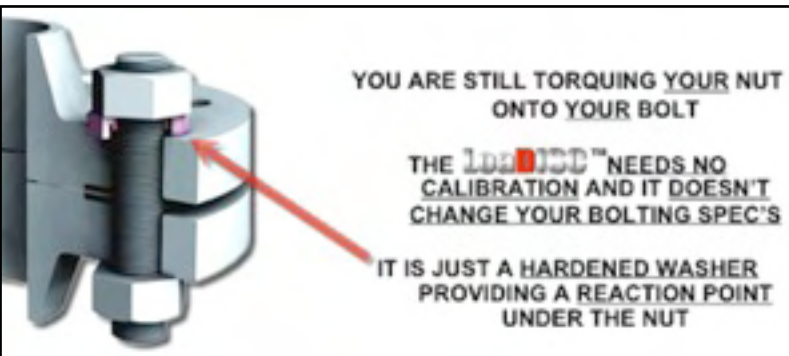
COILERCURVED GUIDE PLATE



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SMS SIEMAG
COILERCURVED GUIDE PLATE

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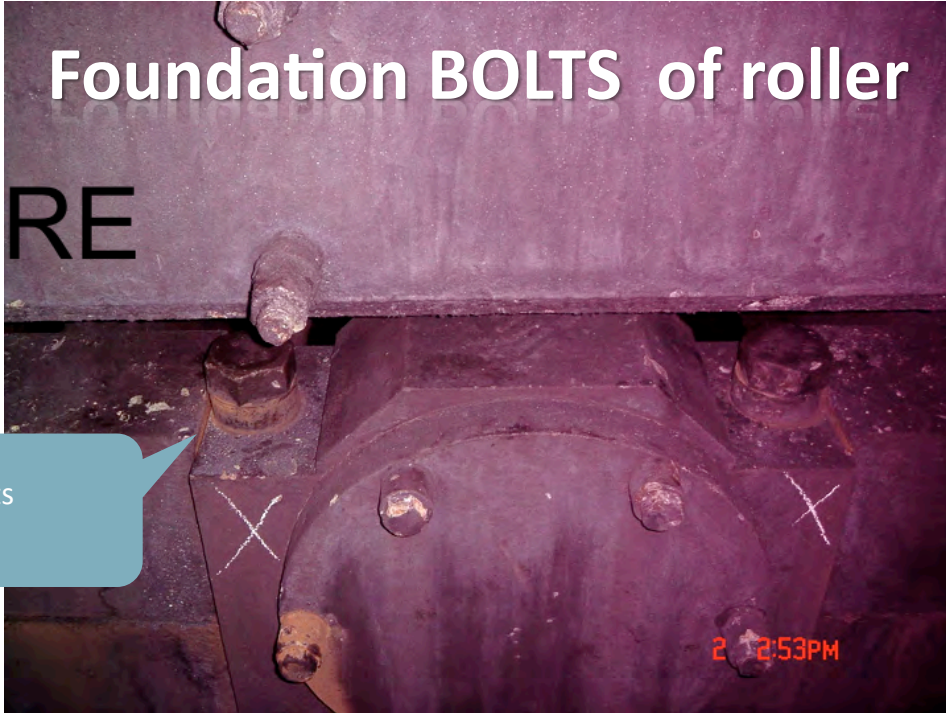


SHOUGANG QIAN'AN steel mill

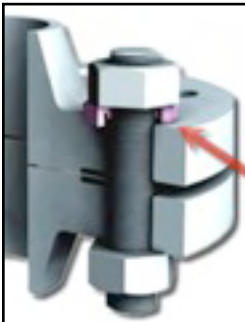
Foundation BOLTS of roller

BEFORE

(8) pcs M48X5 bolts
(4) AVANTI-5



AFTER



YOU ARE STILL TORQUING YOUR NUT
ONTO YOUR BOLT

THE **LD1000™** NEEDS NO
CALIBRATION AND IT DOESN'T
CHANGE YOUR BOLTING SPEC'S

IT IS JUST A HARDENED WASHER
PROVIDING A REACTION POINT
UNDER THE NUT

Stretch-to-Load Technology

SAFETY - QUALITY - SCHEDULE

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SHOUGANG QIAN'AN steel mill

HIGH PRESSURE WATER DESCALER



(12) pcs M33
socket head cap screw
50% cover



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This system cuts bolting time in half while increasing safety and reducing damage to bolt threads. With no external reaction, there are no dangerous pinch points and operator safety is dramatically increased.

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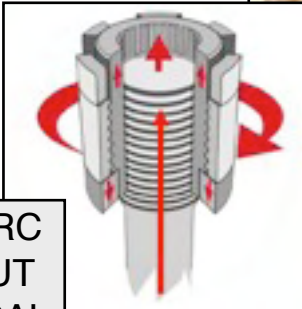
Shougang Jingtang



COILER WRAPPING ROLL



Symmetric
4 tools
fastening
Simultaneously



the HYTORC
CLAMPNUT
MECHANICAL
TENSIONER

CLAMP™

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ILVA STEEL FACTORY

HYTORC
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This is a machine for modelling the steel after it was melt.

The big problem was the vibrations because they is a big hydraulic hammers on it with mechanical transmission, On each machine the transmission is divided in two shaft inside a gear box, So we had to fix this gear box.

They always tight with a hammer tool.(not really safety and accurate !!)

The oldest nut was a M130 but the across flat was 220mm.

So Luigi and Lucien provided to the customer the better way for loosening and tightening easely with accuracy their M130 nut the

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ILVA STEEL FACTORY

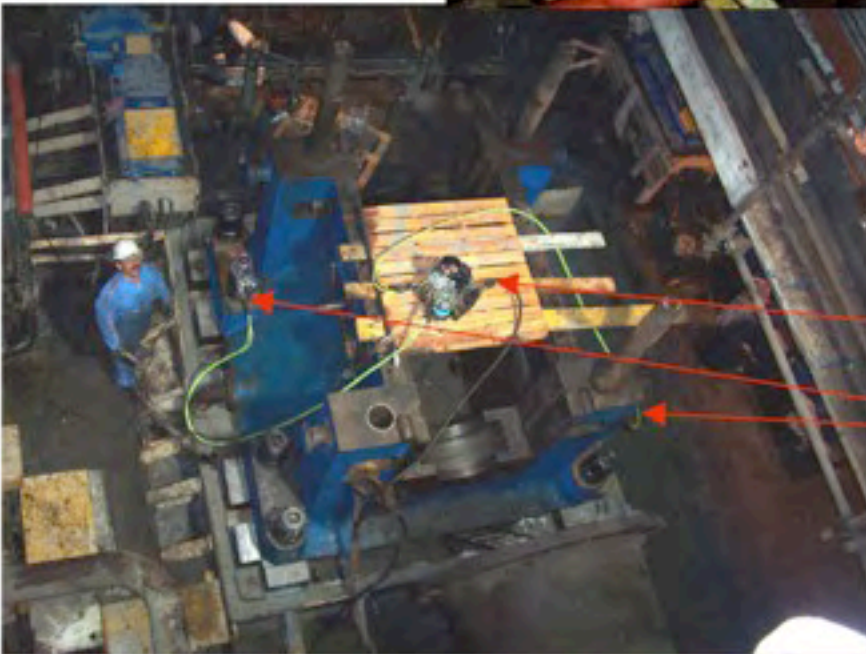
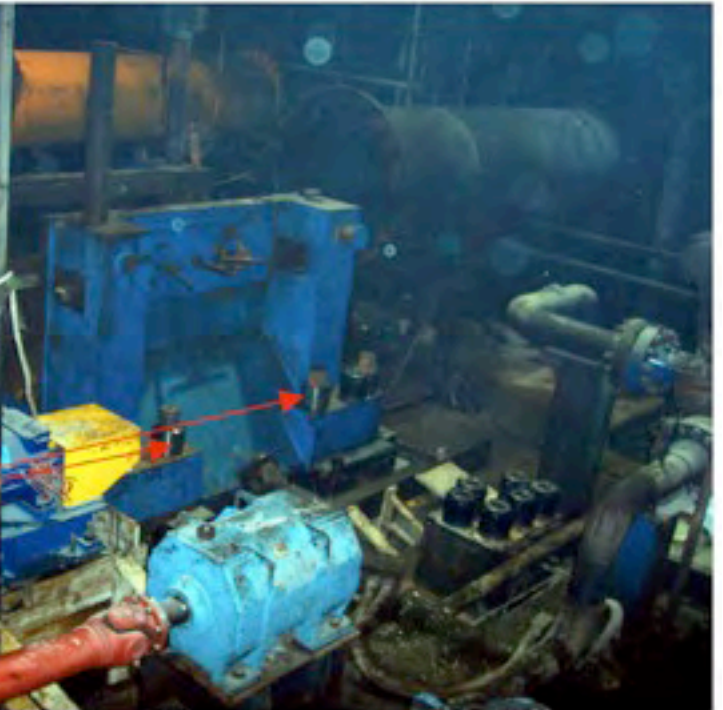
HYTORC
CLAMP™



We put a sleeve between the housing and the clamp, in fact they cannot cut the bolt.



Overview of the job site with the **Clamp Nut**



View above the machine, you see the HYTORC air & the 2 Avanti-20

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ILVA STEEL FACTORY



Avanti 20

Clamp M130

Sleeve

One more happy customer, see the beautiful smile after the job !!



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CLAMP™

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ISG Steel



Limited Clearance CLAMP and LoadISC

By: Russ Meyers May 2005

As most of you know ISG Steel was so pleased with us for once and for all holding their 10,000 horse power motor coupling together with 3" diameter LoadISCs that they have and will continue to rely on our consultation and solutions for all of their bolting needs. Attached are photos from a recent job where

all of the main bolting in the plate rolling mill was redone. With recent buy out of a T-900 the project was over 100K with JETYD. There is still a lot more to do at this plant.

Separator Bolts (sorry no photos):

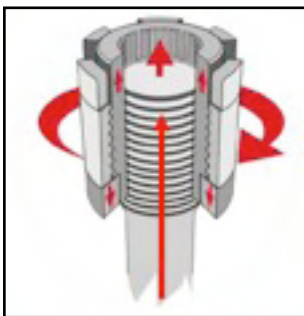
3" diameter turbine style clamps with (2) Avanti-10s

Anchor Bolts:

3-1/2" diameter LC Clamps with (2) 30x1ct tools/links



CLAMP



Main Foot Bolts:

5" diameter Turbine style Clamps with (2) T-900s

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SULO

SULO Wheelie Bins (Pty) Ltd
Somersby NSW 2250, AUSTRALIA



STEALTH-8 WRENCH IN ACTION



Application: SULO 240 Ltr Plastic Bins injection molding machine. Stealth-8, 32mm Wrench Sold. Previous method was a Norbar wrench which kept breaking its 1-1/2" Square Drive.

The **ONLY PROFESSIONALIZED BOLTING COMPANY IN PAKISTAN**



**STEALTH-8 SIMUL-TORC
HYTORC 230 Pump.**

Application: Runner Housing

**Dramatic Improvements in
Speed, Safety and Accuracy!
Working time reduce by 80%**

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新日本製鐵
Nippon Steel Corporation JAPAN

HYTORC[®]
Since 1968

STEALTH SIMUL-TORC



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National American Stainless
ELECTRIC PUMPS

HYTORC
Since 1965



Finish Mill- Descaler Spray Valve Flanges
Stealth-8 w 80mm link Torque 6700 Ft Lbs
Torqued Pattern - 100%



Hot Mill- Roller Cylinders
Stealth-4 w 36mm Allen adaptors
Torque-670 Ft Lbs- 100%



Rough Mill- Descaler Flanges
Stealth-4 w 55mm link Torque 1800 Ft Lbs
Torqued Pattern- 100%



Hot Mill-Roll Shop- Cross Bearing bolts
8x1ct w (AB)60mm Link/Slider
Torque- 6700 Ft. Lbs



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POSMEC

POSMEC Machinery & Engineering
ULSAN, SOUTH KOREA

HYTORC
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AVANTI-8 WRENCH IN ACTION!



STEEL ROLLING MILL APPLICATION



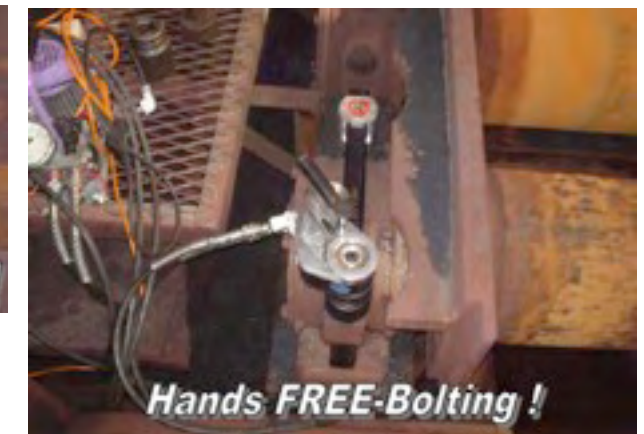
Torsion-Free internal Mechanism!



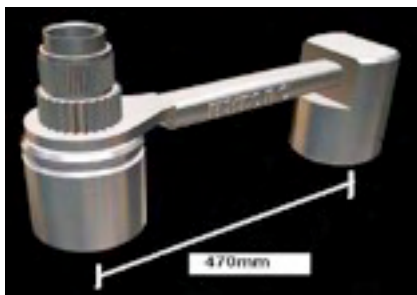
Heavy Duty Corrosion problem!



Innovative Co-axial reaction mechanism!



Hands FREE-Bolting!



**AVANTI-8 Wrench with extended R/
Arm, aluminum dummy reaction
socket & RSST-20 Pump SOLD.**

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Since 1965
CLAMP[™]



CHANG SHIN
PRESS CO.,LTD

CHANG SHIN PRESS



SUPER HIGH SPEED PRECISION PRESS

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**Steel Mill Application
OHIO, USA**



The customer has had difficulty in keeping the bolts tight due to vibrations problems.

There is little clearance above the nuts and using manual wrenches or impact was not achieving the torque required.

Hytorc Clamp and Stealth 2 did the job.

Now NO more loose bolt problems.

Due to the success of the Clamp Nut & Sales Skills the Stealth 2, the customer is planning to order Clamp Nuts for all 14 motors in the Steel Mill

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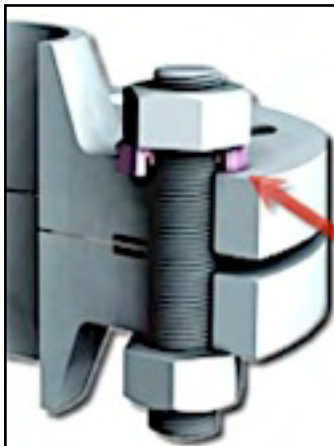
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ISPAT ISCOR LONG STEEL
NEWCASTLE, SOUTH AFRICA

HYTORC
Since 1965

Old method caused excessive side load!



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ISPAT ISCOR LONG STEEL
NEWCASTLE, SOUTH AFRICA

HYTORC
Since 1968



18-XLCT wrench with 125mm A/F R/Link & New Style holding plates plus Qty x 75 M90-125mm A/F DW LoaDISC system SOLD. Previous extreme side load caused studs to break as below, but now **problem resolved with ZERO Torsion, ZERO Side Load - LoaDISC application.**

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ISPAT ISCOR LONG STEEL
NEWCASTLE, SOUTH AFRICA



STEP 1



STEP 2



STEP 3

LoaDISC



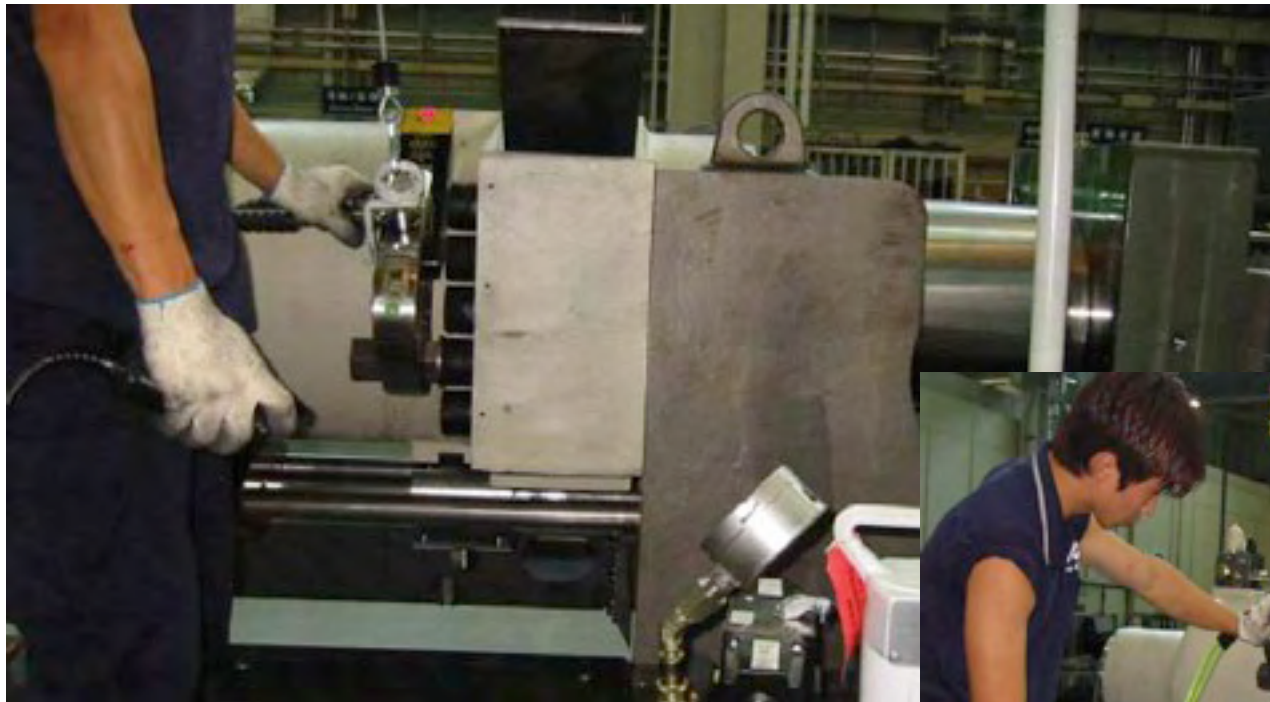
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ENGEL

HYTORC
Since 1965

**ENGEL MACHINERY
SOUTH KOREA
MOON-HYEON NO**



**STEALTH-8, 300mm Extended
Reaction Arm & SST-20 Pump
SOLD. Previous method was using
Enerpac wrenches but the customer
found these to be unreliable, heavy
& slow.**

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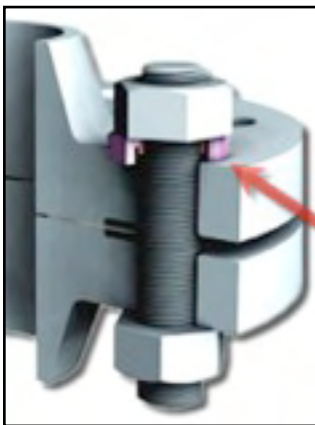
The HYTORC AVANTI
3-in-1 Hydraulic Torque Wrench

for TORQUE

for
PURE
TENSION



for TORQUE-TENSION



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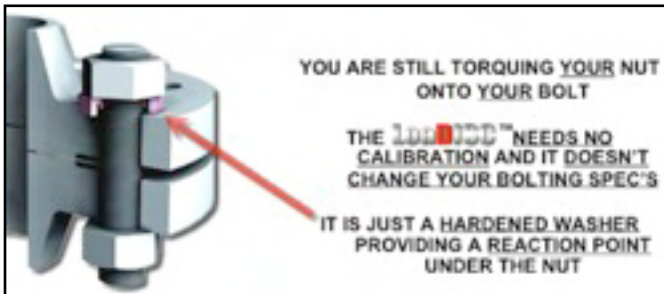


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