

HARDLOCK®

The proven locking nut for Steel Mill applications

Where you can find the advantage of HARDLOCK Solutions:

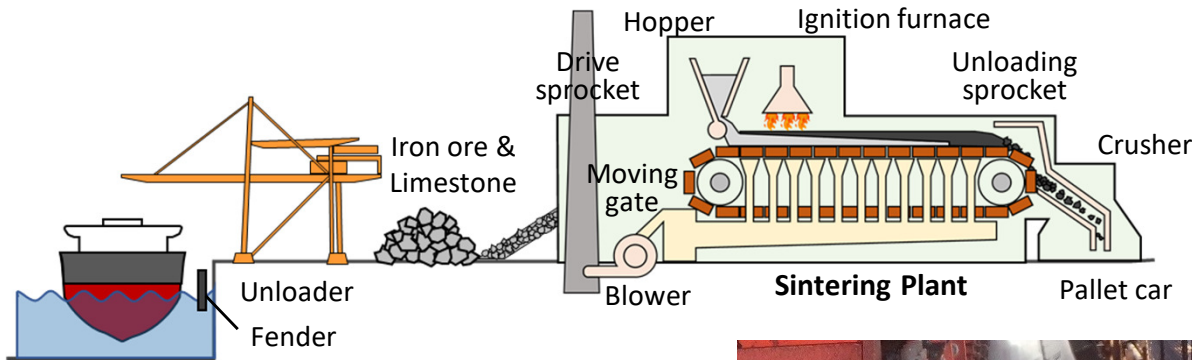
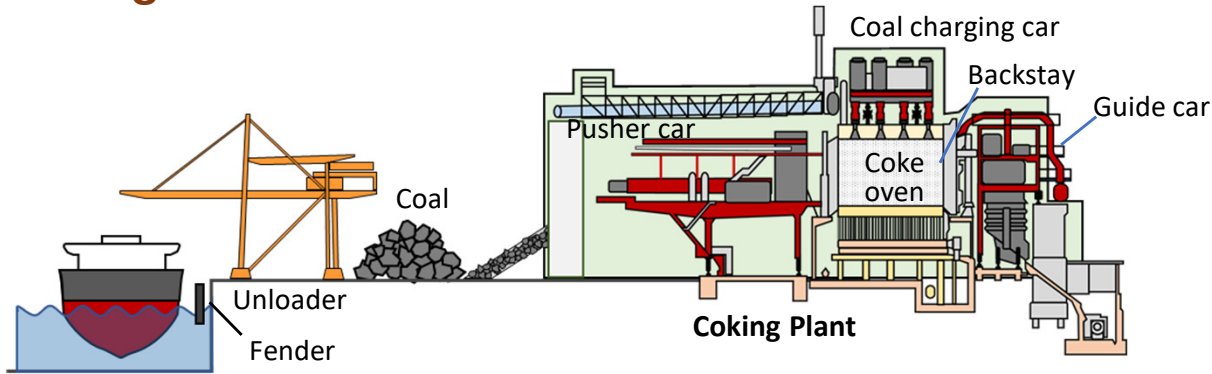
- (1) Exposed to strong external load as well as severe vibration**
- (2) Switching from welding to improve workability of maintenance**
- (3) Difficult to re-tighten or inspect bolted joints once they are installed**
- (4) Strict safety is required**
- (5) Joints are not or very small preloaded**
- (6) Necessary to retrofit to existing worn bolts**



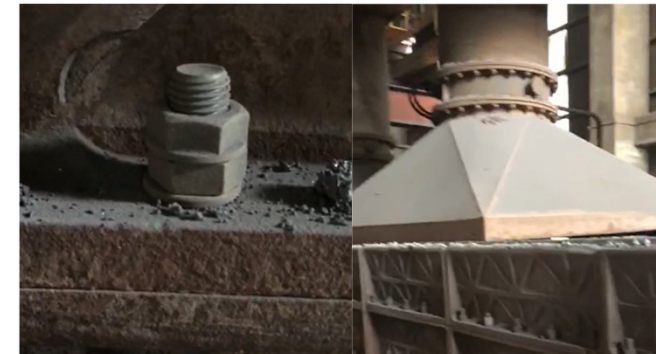
HARDLOCK Nuts Use in Steel Mill (1)

Coking & Sintering Plant

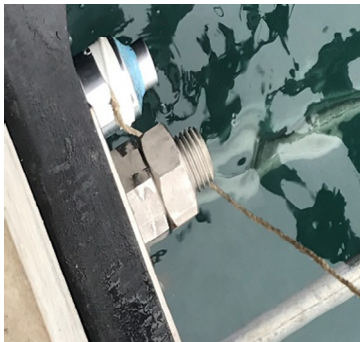
- **Fender**
- **Unloader**
 - Bucket
 - Rail track
 - Stacker
 - Hopper Liner
 - Chain Conveyor
- **Coking Plant**
 - Backstay Bolt
 - Guide Car
 - Insulation Shield
- **Sintering Plant**
 - Hopper liner
 - Conveyor skirt
 - Moving gate
 - Sprocket wheel
 - Pallet Car



Coal Charging Car
HLN M8~M33 SS400, SUS304



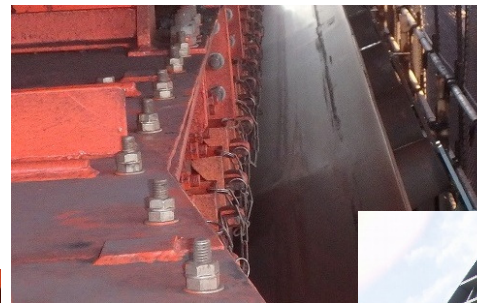
Pallet car
HLN M24 S45C



Fender
HLN M56 SUS304



Unloader
HLN M5~M52
SUS304, SS400/HDZ, SCM435/DACROTIZED



Conveyor skirt
HLN M8~M24
SUS304,
SS400/HDZ



Hopper liner
HLN M16 SS400/HDZ



Safety is power!



HARDLOCK Nuts Use in Steel Mill (2)

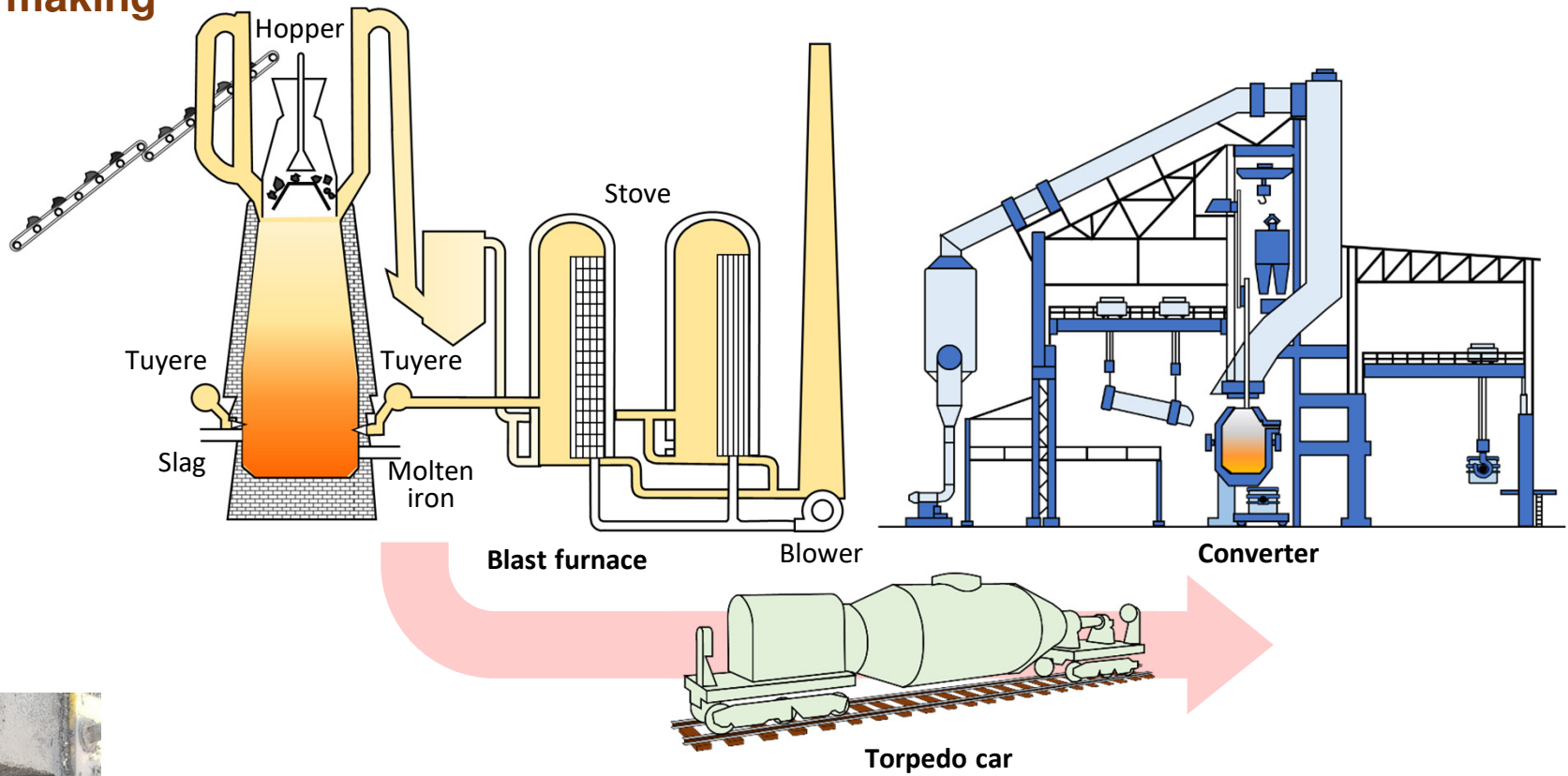
Iron Making ~ Steel making

- **Blast furnace**

- Stove gas cut off equipment
- Stove valve flange bolt
- Tuyere branch heat-resist bolt
- Blower

- **Molten iron transport**

- Fishplates bolt
- Rail track turnbuckles



Turnbuckle for rail track
HLN M30 SS400 & M30 Left handed
* to ensure strengthen the track so that the rails are held in position



Fishplates
HLN M20 S45C



Blower
HLN M16 S45C

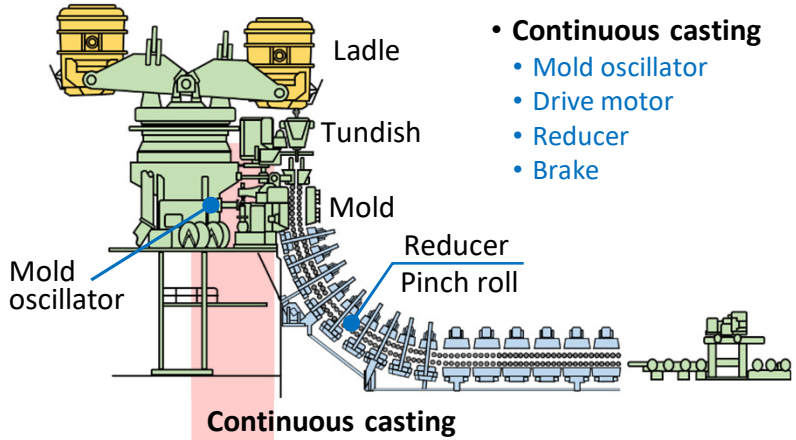


Safety is power!

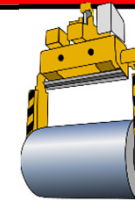


HARDLOCK Nuts Use in Steel Mill (3)

Continuous casting ~ Rolling



HLB (HARDLOCK Bearing Nut)
M190 SS400



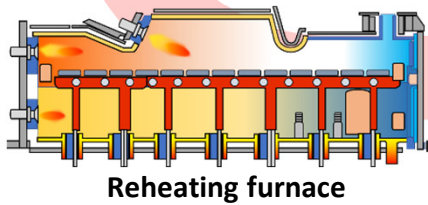
Coil lifter

- Coil lifter
 - Housing
 - Reducer
 - Arms



Roll lifter
HLN M24 SS400

- Reheating furnace
 - Table apron
 - Roller bearing



• Coiler

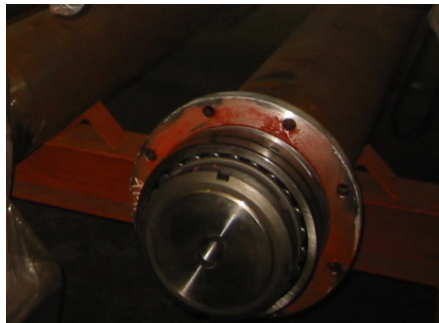
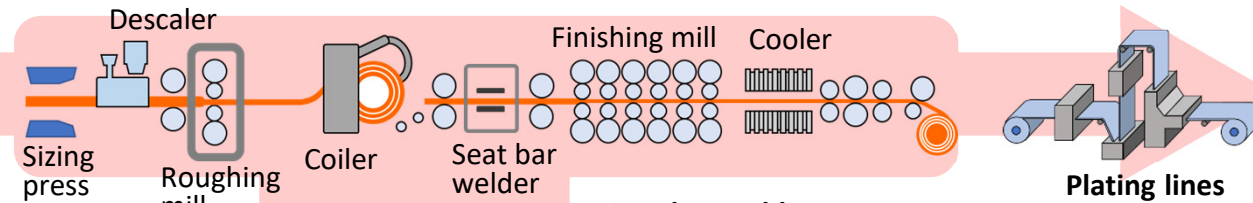
- Coiler top pinch roll
- Unit frame switch cylinder
- Tension bar joint pin

• Finishing mill

- Turntable roller bearing gauge bolt
- Roller table gauge bolt

• Plating lines

- Air piping
- Water piping
- Steam piping
- Acid piping
- Acid wash tank

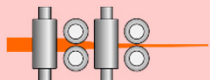


HLB (HARDLOCK Bearing Nut)
M140 SS400

• Roughing mill

- Pipe flange for descaler
- Roller stand for side guide
- Header guide of inlet & outlet
- Roller bolt
- Table roller gauge bolt
- Feed roller flange coupling bolt
- Turntable roller bearing gauge bolt

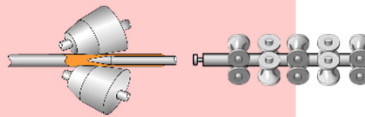
Hot strip mill



Wire rod mill



Plate mill



Seamless pipe mill

• Seat bar welder

- Feed roller



Feed Roller HLB M45 S45C



Hydraulic tank
HLN M24 SS400



Safety is power!

