ROLL REPLACEMENT

TUBE MILL FOR THE PRODUCTION OF WELDED STEEL TUBES
TYPE MTM 110/C/ST/HF

Manufacturer	OFFICINE M.T.M. S.P.A.
Serial number	08M154
Building year	2008

MTM
TUBE MILLS

experience your innovation

1 - MAIN TABLE OF CONTENTS

pag.

2 - ROLL REPLACEMENT

2.1 MOTORISED ROLL REPLACEMENT FOR WORKING STANDS

Proceed as follows:

1- Hydraulic nuts
2- Contrast fork
3- Mobile shoulder lock bolts
4- Coupling devices
5- Mobile shoulder

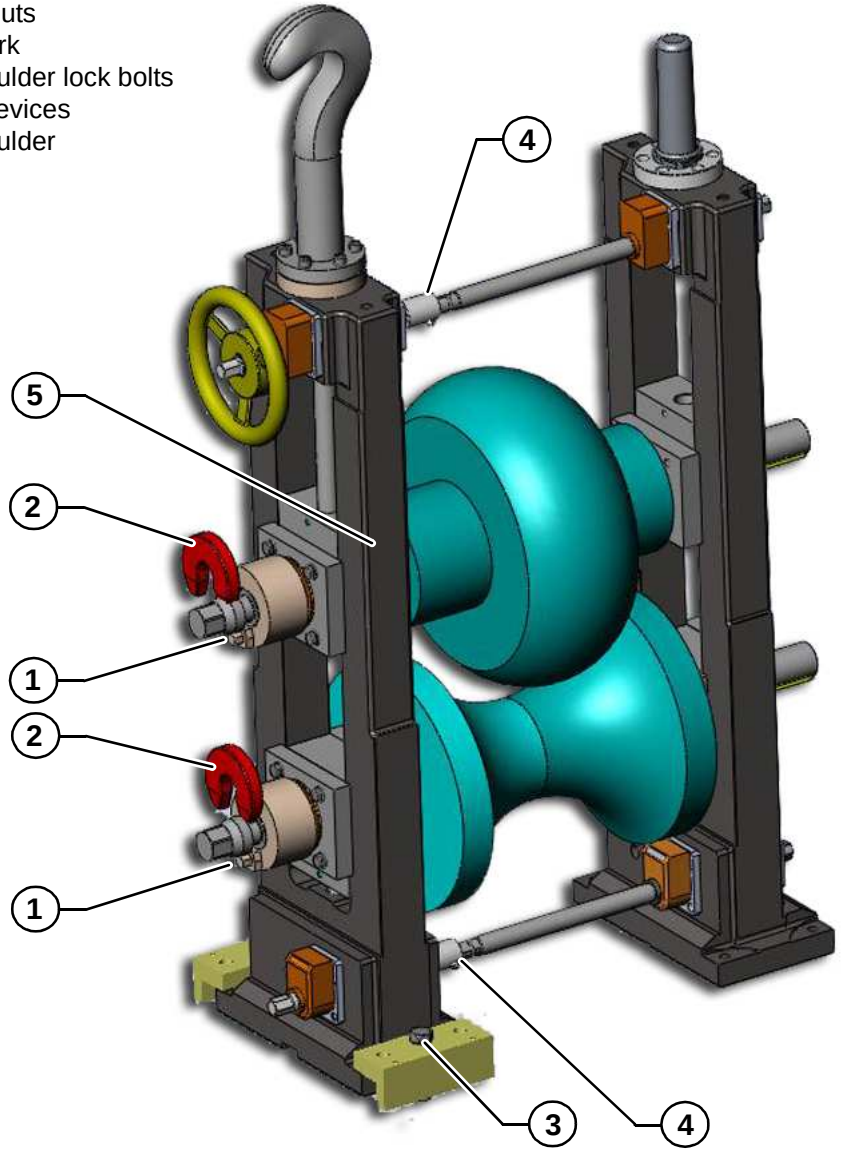


Fig. 2-A *Mobile shoulder extraction: phase 1*

1- Loosen the hydraulic nuts pos.1 in *Fig. 2-A,* located on the lower and upper shafts.

2- After removing the nut, remove the contrast fork pos.2.

3- Loosen the mobile shoulder lock bolts pos.3 in *Fig. 2-A* and release the coupling device pos.4 from the top and the bottom.

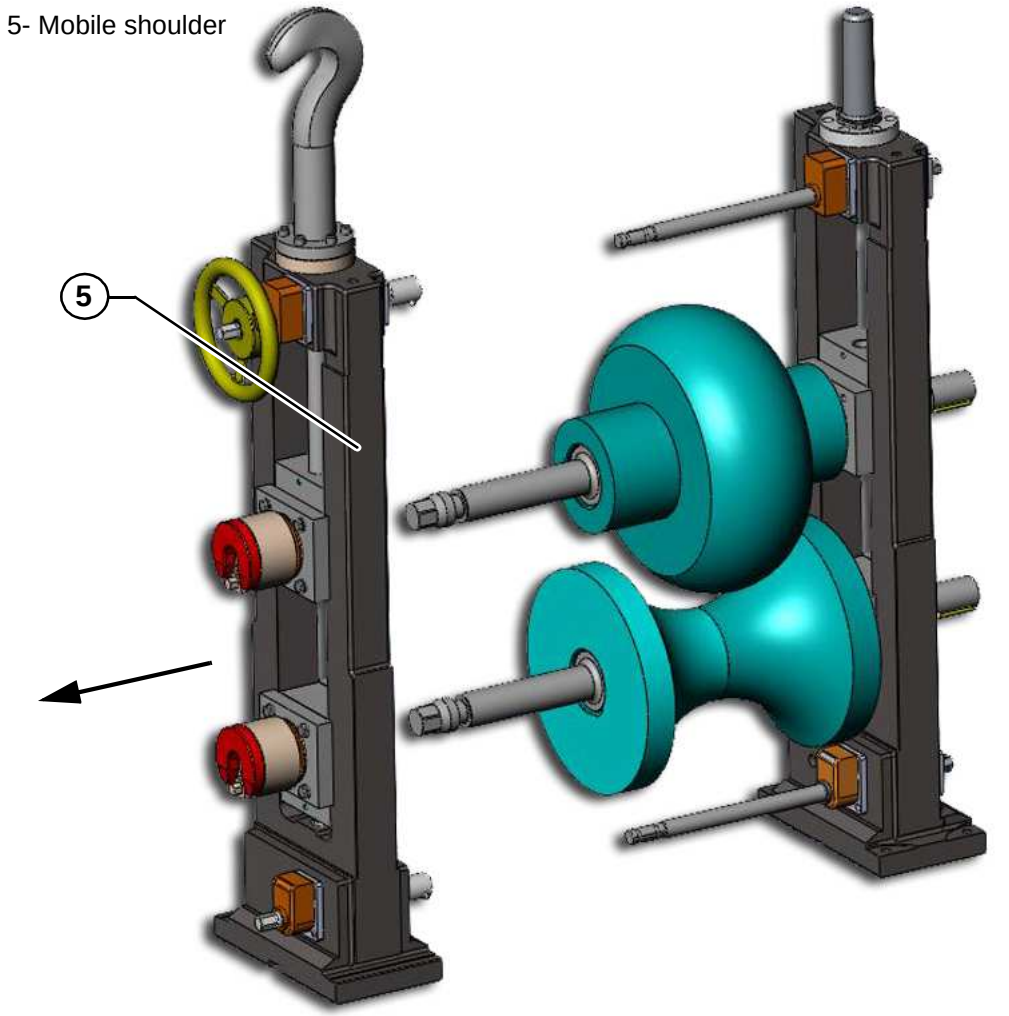


Fig. 2-B *Mobile shoulder extraction: phase 2*

4- At this point, the shoulder pos.5 in can be removed using the trolley and the new rolls installed.

2.1.0.1 ROLL ASSEMBLY

The following roll assembly procedure applies to all working stands.

After removing the front mobile shoulder, install the rolls.

1- Use the roll loading sleeve pos.1 inserting it in the lower shaft. Install the first half of the lower roll pos.2 in *Fig. 2-C.*

1- Roll loading sleeve
2- First half of the lower roll

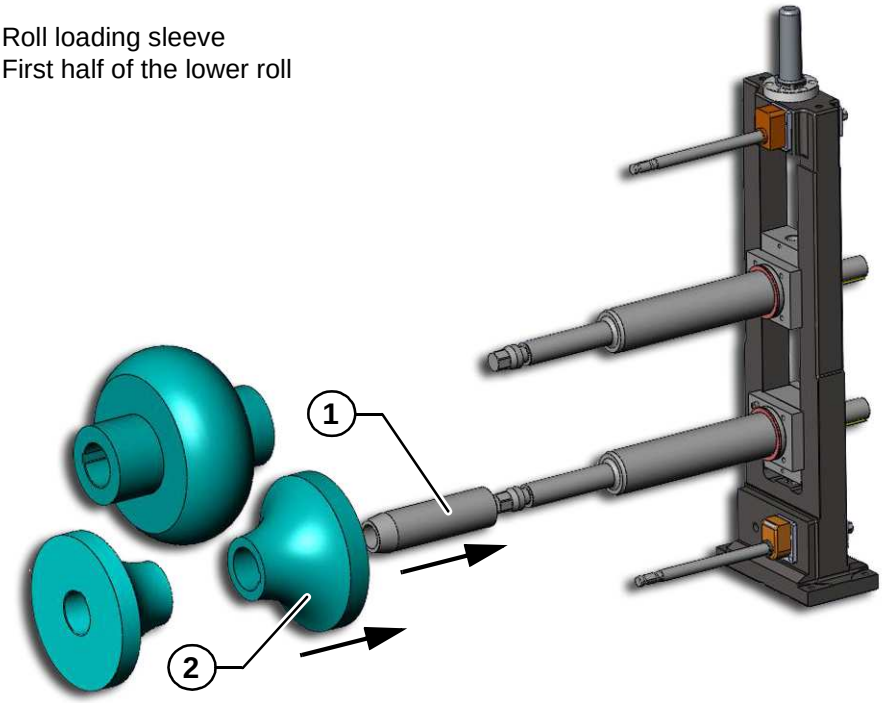


Fig. 2-C *Roll assembly: phase 1*

2- Place the roll loading sleeve pos.1 on the upper shaft and install the upper roll pos.3 in *Fig. 2-D*.

1- Roll loading sleeve
3- Upper roll

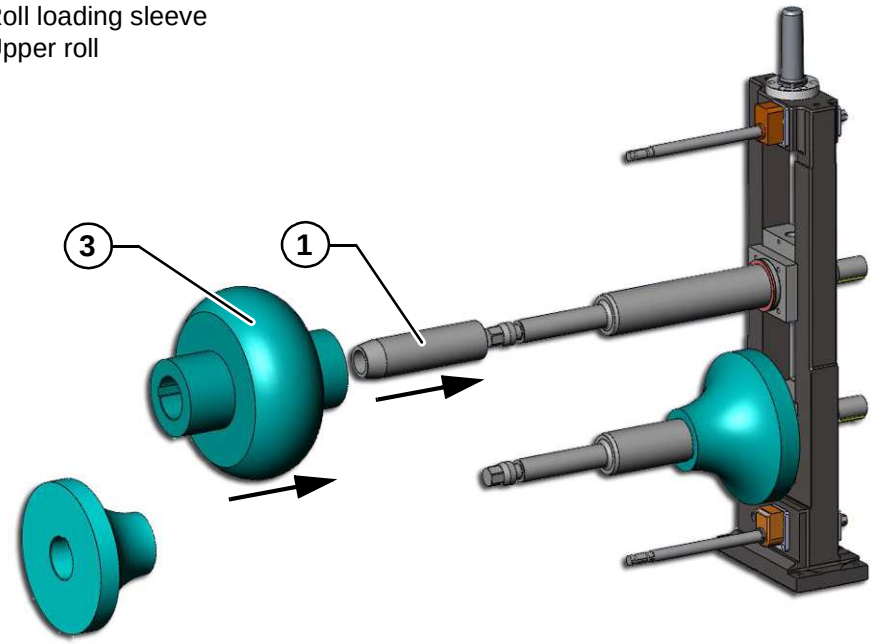


Fig. 2-D *Roll assembly: phase 2*

3- Align the roll loading sleeve pos.1 with the lower shaft and install the second half of the lower roll pos.4 in *Fig. 2-E*.

1- Roll loading sleeve
4- Second half of the lower roll

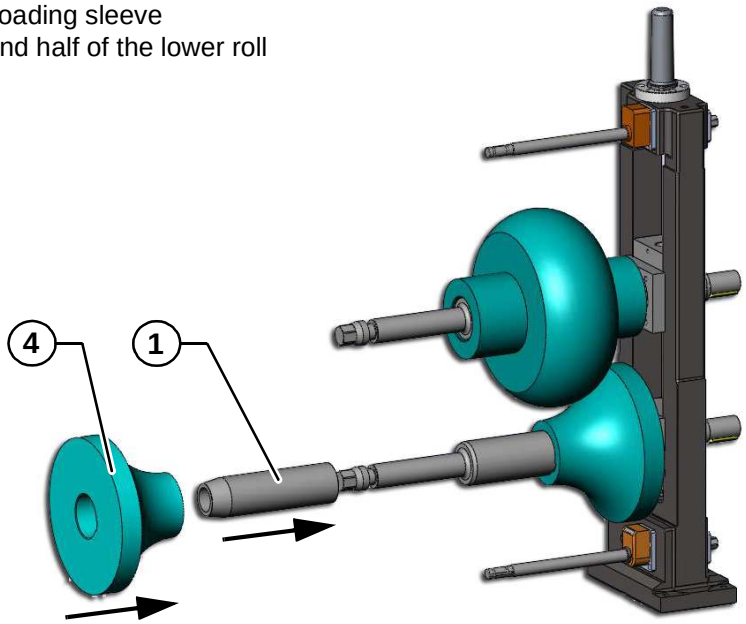


Fig. 2-E *Roll assembly: phase 3*

4- Remove the roll loading sleeve pos.1 from the lower shaft (see *Fig. 2-F*).

1- Roll loading sleeve

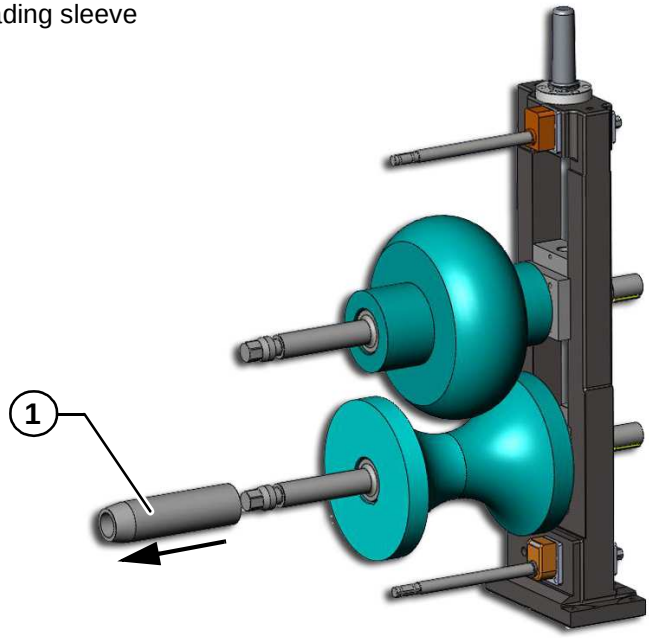


Fig. 2-F *Roll assembly: phase 4*

5- Place the front mobile shoulder near the base notch and insert it (see *Fig. 2-G*).

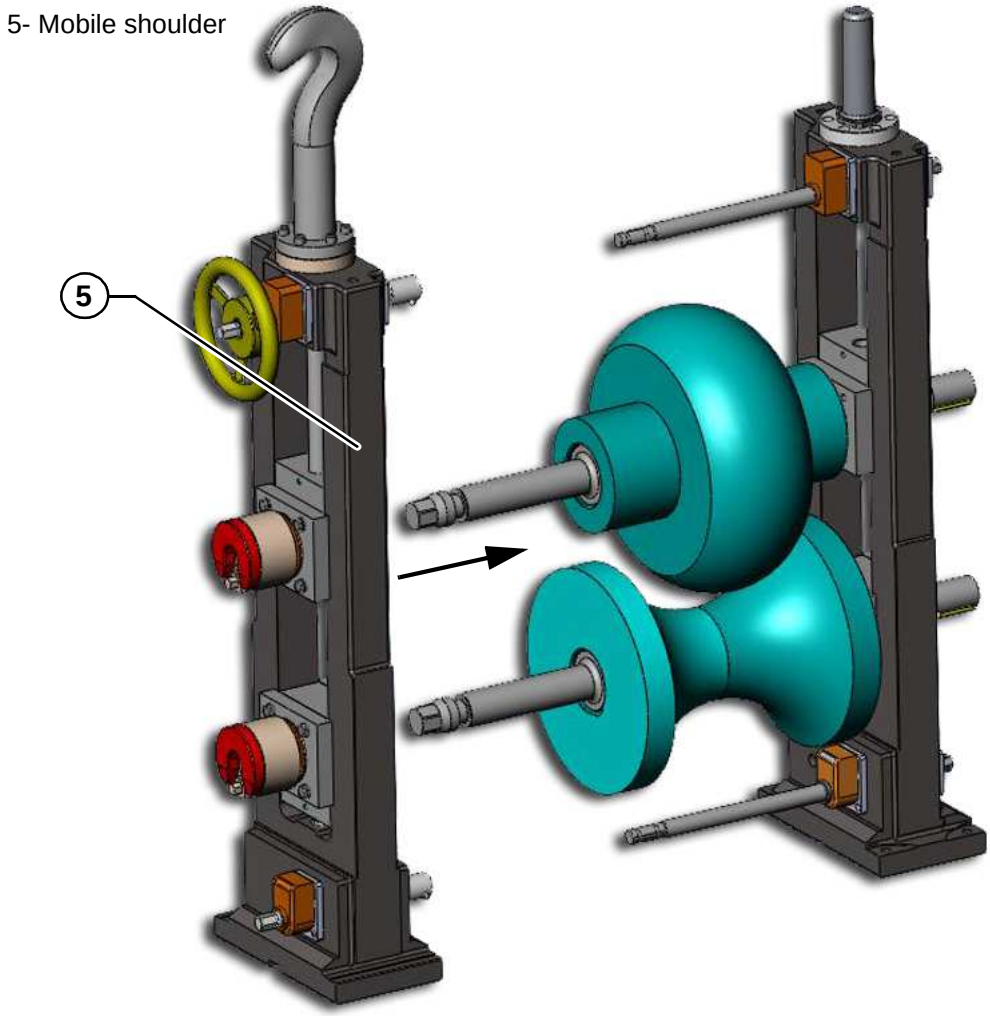


Fig. 2-G *Roll assembly: phase 5*

6- To reassemble the front mobile shoulder, follow the steps described in paragraph *2.1 MOTORISED ROLL REPLACEMENT FOR WORKING STANDS (page 2-1)* in reverse order.

1- Hydraulic nuts
2- Contrast fork
3- Mobile shoulder lock bolts
4- Coupling devices
5- Mobile shoulder

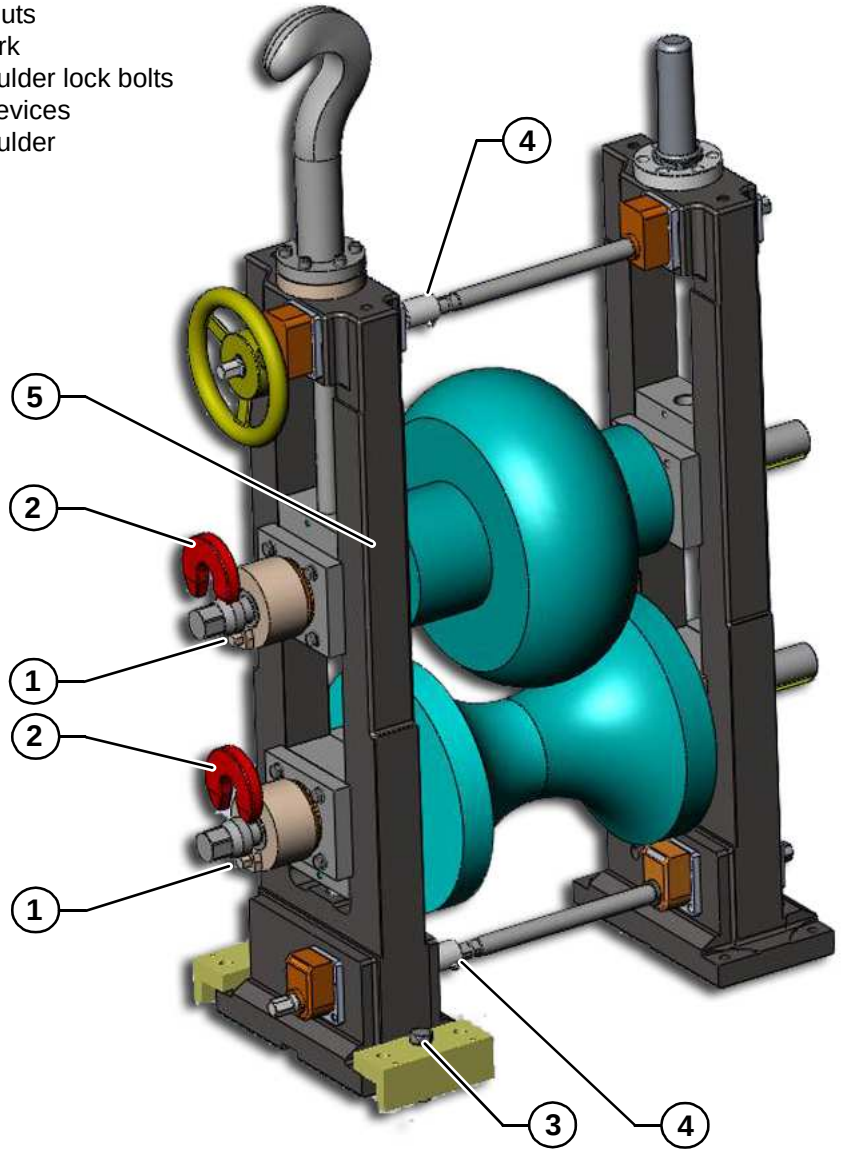


Fig. 2-H *Front shoulder reassembly*

2.1.1 SIDE STAND ROLL REPLACEMENT PROCEDURE

1- Ring nuts
2- Lock screw
3- Eye-bolts
4- Rolls

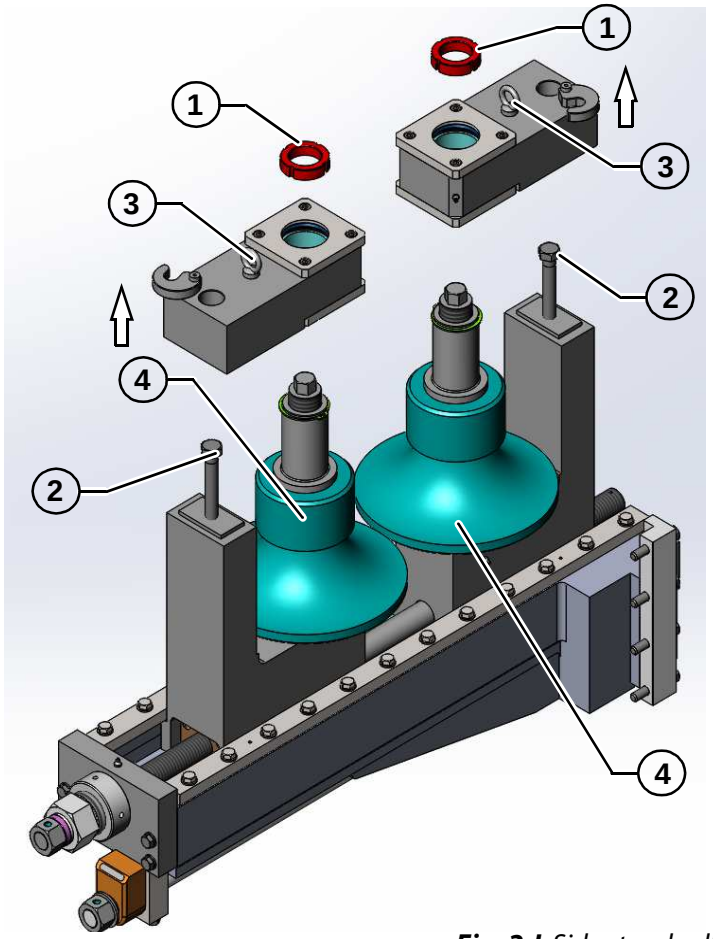


Fig. 2-I *Side stand rolls*

Proceed as follows (see *Fig. 2-I*):

1- unscrew and remove ring nuts pos.1

2- unfasten screws pos.2

3- lift the upper bearing support using eye-bolt pos. 3 and proper lifting means

4- now the rolls are free and can be replaced

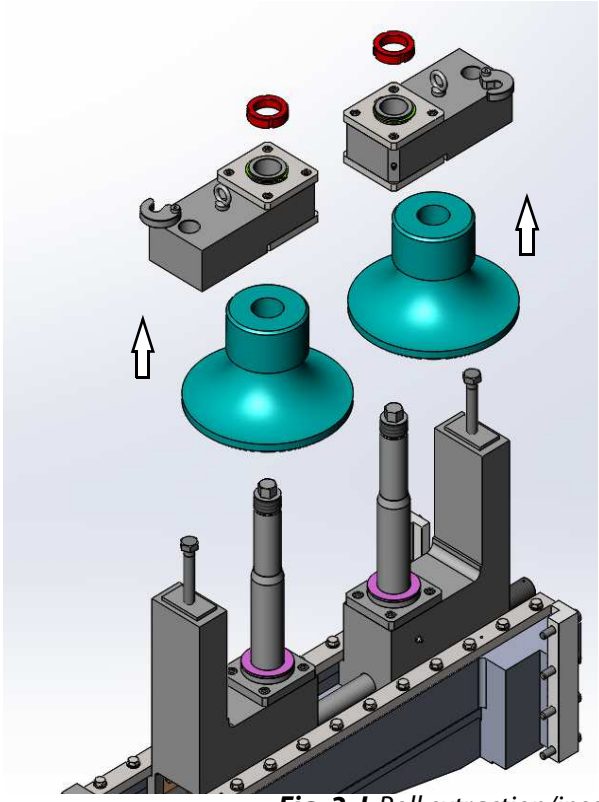


Fig. 2-J *Roll extraction/insertion*

After roll replacement fix components in reverse order.

2.1.2 ASSEMBLY SCHEME OF ROLL LOCKING RING NUTS ACCORDING TO LINE WORK DIRECTION

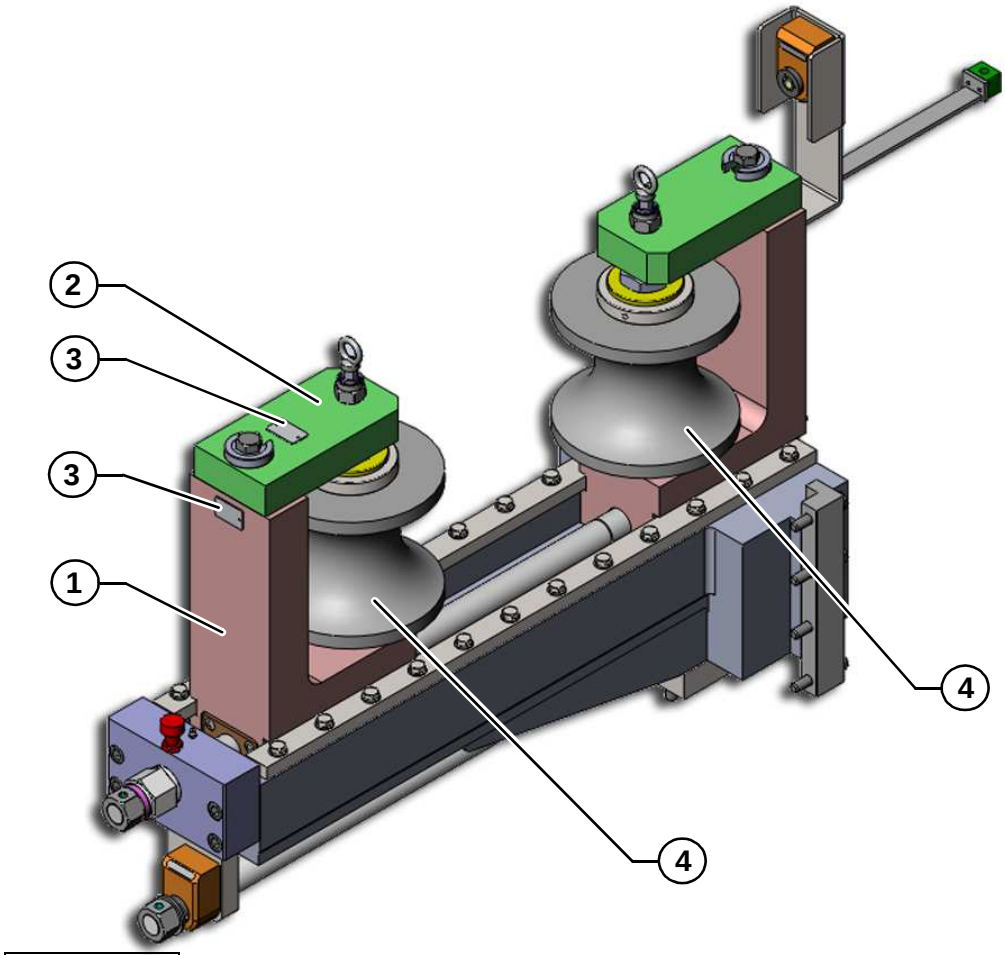


Fig. 2-K *Assembly scheme of roll locking ring nuts according to line work direction*

1- Roll block pos.1 and the support plate of the roll bush pos.2, operator side, are identified by plates marked with A (pos.3).

2- During roll change always make sure that unit pos.1 with letter A is assembled on support pos.2 with identifying letter A.

This procedure avoids the unscrewing of bottom ring nuts that block roll pos.4; one ring nut is provided with a right direction threading, the other with a left direction threading

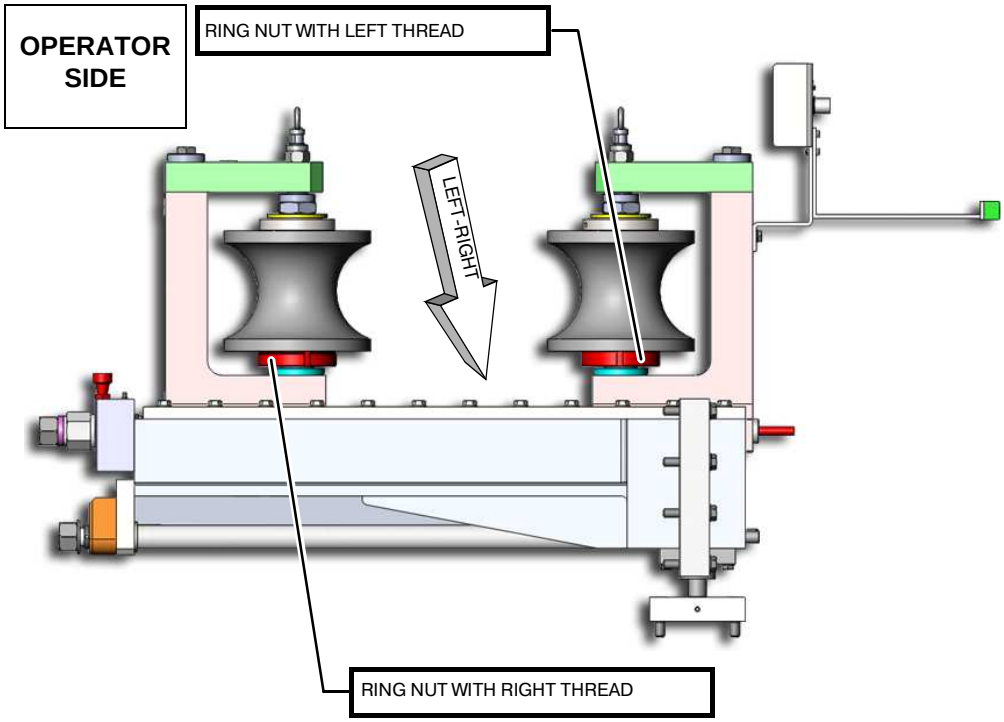


Fig. 2-L *Assembly scheme of roll locking ring nuts according to line work direction*

2.1.3 ROLL HOLDING MANDREL PREPARATION

2.1.3.1 QUICK CHANGE EDGE GUIDE UNIT HOLDING MANDREL

1- Unscrew lock nut pos.1
2- Unscrew the 2 bearing block lock screws pos.2
3- Lift the bearing block pos.3 off the shaft
4- At this point the rolls can be removed pos.4
5- Proceed in reverse order for assembly.

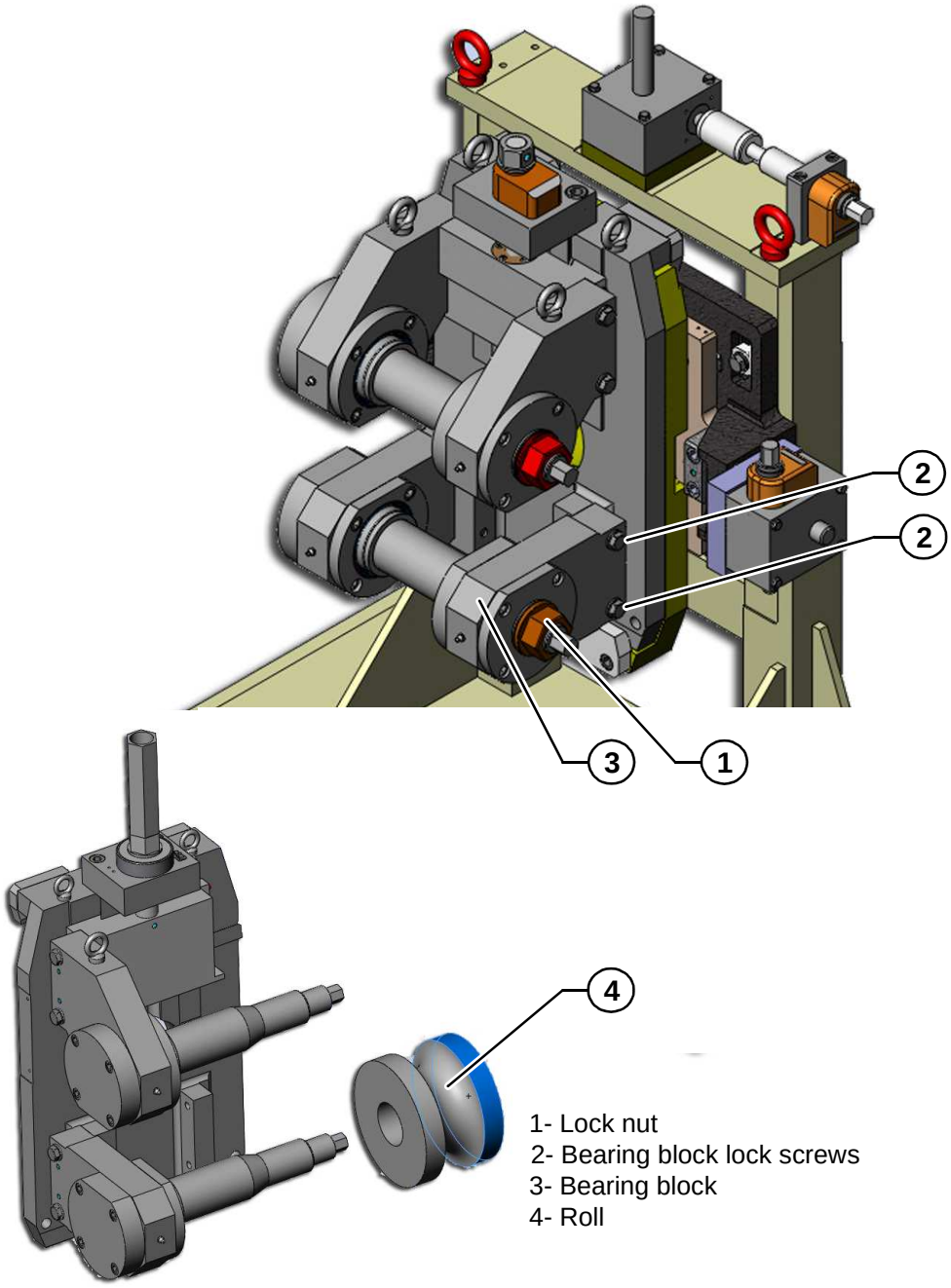


Fig. 2-M *Quick change edge guide unit holding mandrel*

2.1.3.2 IMPEDER SUPPORT

Before producing tubes, stock impeders for the tube to be produced.

These impeders are attached to the support mounted on the presetting fin-pass on eighth forming stand.

2.1.3.3 FORGING ROLL HOLDING MANDREL

- Unscrew the 2 screws supporting of roll holding pin.
- Remove the pin-locking fork.
- By removing the roll holding pin, the roll with shim adjustments and bearings will release.

  Carry out the above operations for the assembly in reverse order.

2.13.4 STRAIGHTENING (TURK'S HEAD MANDREL)

1- Remove screws pos.1.

2- Remove the roll pin to extract the roll with shims and bearings.

3- Proceed in reverse order for assembly.

1- Lock screws

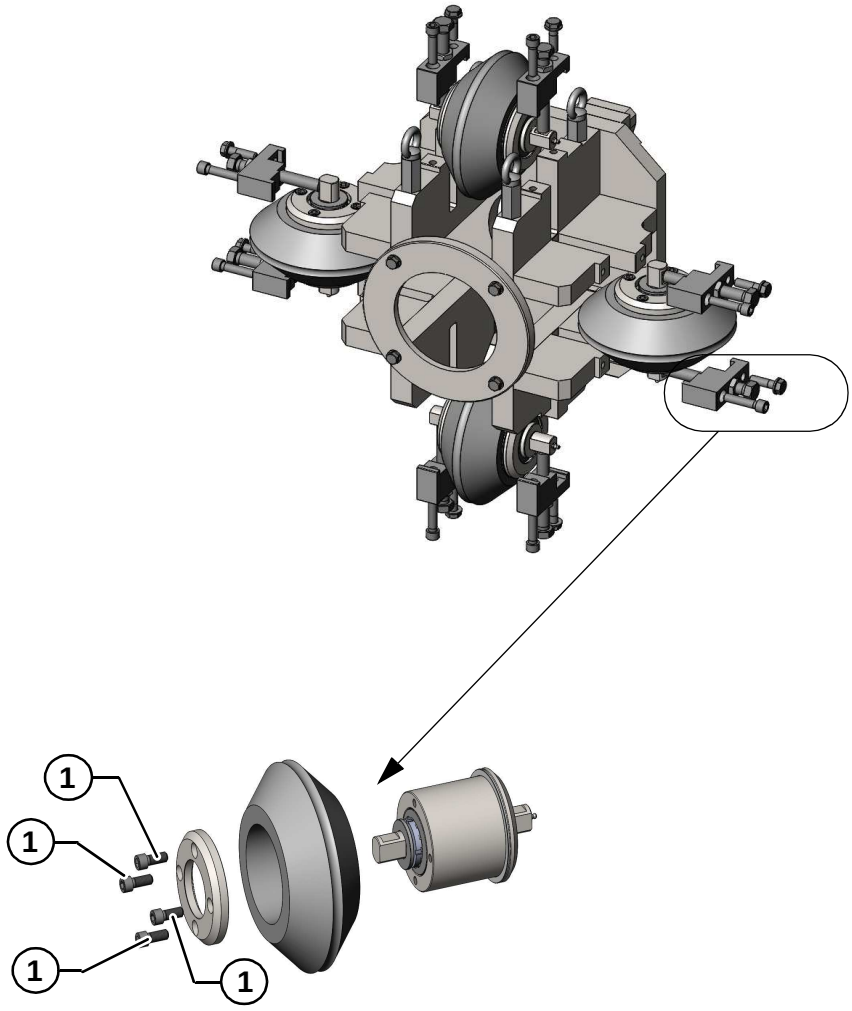
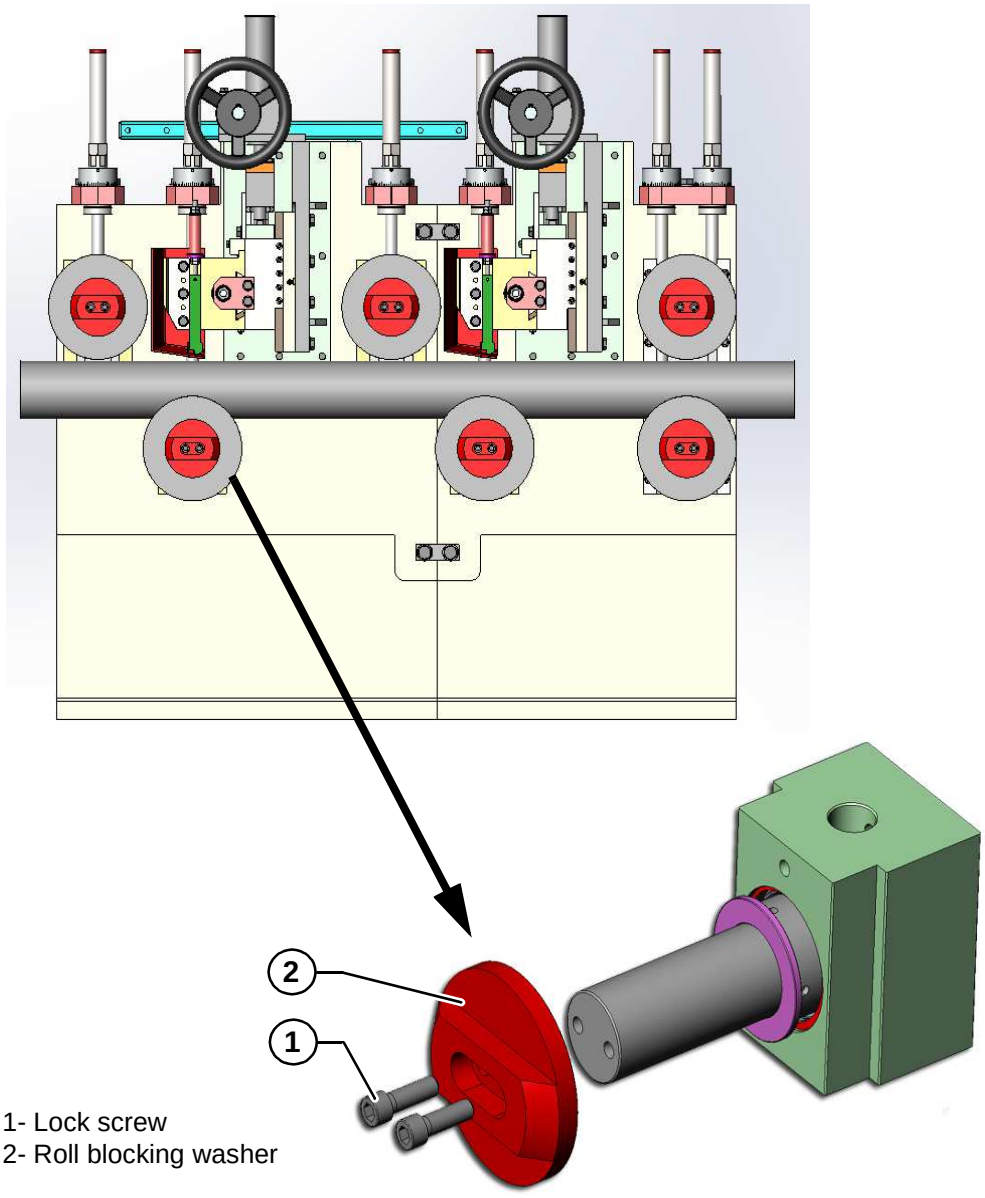


Fig. 2-N *Straightening (turk's head mandrel)*

2.1.4 OUTSIDE SCARFING ROLL REPLACEMENT

1- Unscrew the 2 roll blocking washer lock screws pos.1
2- Lift the roll blocking washer pos.2 off the shaft
3- At this point the rolls can be removed
4- Proceed in reverse order for assembly.



1- Lock screw
2- Roll blocking washer

Fig. 2-O *Outside scarfing roll replacement*

OFFICINE M.T.M. S.p.A.

via Palladio 36 | 30038 Spinea Venezia | Italy

tel +39 041 5089611 | fax +39 041 999611

info@mtmtubemills.com | www.mtmtubemills.com