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1906RSCHH COUPLING

-INSTALLATION GUIDE-

TOOLS REQUIRED

1. OD measuring tape
2. Suitable lifting devices and equipment like slings, long reach cranes, dunnage
3. Torque Wrench
   - 1-1/16" Deep Socket
   - 24mm Socket
4. 1-1/16" Standard wrench
5. Gasket lubricant – If using on a potable water line, lubricant must be NSF 61 certified
6. Anti-Galling compound for tie rods and gripper bolts
7. Suitable tools/equipment for cleaning pipe ends such as a belt sander and scraping tools.
8. Polyethylene wrap – If incasing in concrete

COUPLING PREPARATION

The 1906RSCHH (restrained coupling for HDPE to HDPE connections) comes factory pre-assembled ready to be installed; however, there are a few points to check out prior to installation:

1. The bottom tie rod nuts may have backed off during transportation. Hand tighten them prior to moving the coupling off its pallet.
2. Look inside of the coupling to check the gaskets as they may have migrated inwards during transportation. If they have to the point where the coupling will not fit over the pipe, sling the coupling and lift it up off the pallet. Take a mallet and pound the gasket back. Should this not work, back off the respective gland nuts and try again.

3. MAKE SURE THAT THE GRIPPERS ARE PUSHED ALL THE WAY TOWARDS THE GASKET AS SHOWN IN THIS PICTURE.

4. APPLY LOTS OF GASKET LUBRICANT – IF USED ON A POTABLE WATER LINE BE SURE TO USE A NSF CERTIFIED LUBRICANT!

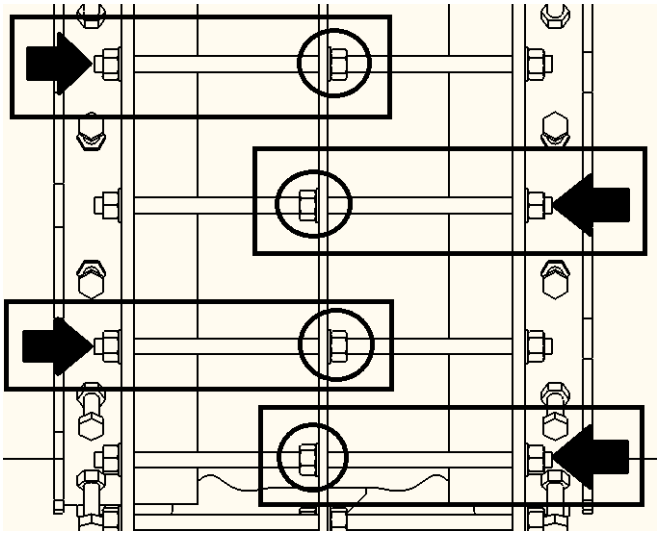
5. Sling the coupling, lift it off of the pallet and remove all wood dunnage from between the glands and the barrel ring.
6. Lubricate all tie rods and radial gripper bolts with anti-galling compound.

PIPE PREPARATION

7. Reconfirm the circumference of the pipe to ensure that the pipe is within the coupling range. Note that the pipe will neck down 3” from the end so take your measurements beyond this zone.
8. Check the roundness of the pipe by taking 3-measurements equally spaced across the end of the pipes. Out of roundness must not exceed 9/16”
9. (2) Rigid stainless inserts are provided with each coupling. 1-side of each has a lead-in chamfer. This is the side that goes into the pipe first. Robar recommends that the inside edge of the pipe be chamfered ½” x 45-degrees as this will further aid insertion - Ideally, the end of the pipes are cut clean at the time of installation, as this will minimize the amount of time the pipe has to neck down again. Better yet, if available a pipe expander is recommended to assist installation.
10. Do a quick size check of the insert - it should not slide into the pipe by hand. Some force will be necessary to install. In some cases the insert may be too big. It is permissible to cut the insert lengthwise and fit it to suit the ID of the pipe. If this is necessary, please contact Robar for further instructions. All re-welding of the insert must be done by a qualified welder in accordance with AWS D1.6.
11. Clean the exterior working area of the pipe – remove any sharp burrs and smooth out any scrapes and gouges as best as possible.

INSTALLATION

12. Safely push the inserts fully into each pipe.
13. Apply lubricant to the exterior working area of the pipe. If the coupling is being used on a potable water line then the lubricant must be NSF certified.
14. Locate the coupling over the pipe gap, making sure that the coupling is centered over the gap.
15. Hold the coupling so that there is as even a gap as possible between the outside of the pipe and the coupling all the way around both pipes. The use of wooden shims to keep the coupling centered over the pipes is permissible – just ensure shims are not immediately located beneath the grippers.
16. Please note that there are (3) nuts per tie rods with a single butted against the barrel ring, but that the locations of the nut alternates sides of the barrel ring – these nuts are circled in the image below and will NEVER need torquing. Torquing of the tie rods will be done in stages with the first 2-stages being the most critical:



1st – start on 1-gland (end) only. Use a star bolting pattern and torque only those gland nuts that have an opposite barrel ring nut (circled in the image right) to 30 ft-lbs, drawing the gland in parallel to the barrel ring. Periodically, measure the distance from the barrel ring to the gland and ensure that the difference does not exceed 3/8". Always ensure the glands draw in evenly.

2nd – Do the same to the other gland (repeat 1st step).

3rd – Repeat the above 2-stages torquing the exact same nuts to 60 ft-lbs for both glands.

4th – Continuing to use a star pattern now torque all the gland nuts to 60 ft-lbs for both glands. Always ensure the glands draw in evenly. At this point any wood shims used in Step #15 can be carefully removed.

5th – Completely back off all barrel ring nuts leaving a gap of ½" or more.

6th - Then torque all the gland nuts to 90 ft-lbs using a star bolting pattern on both glands. Wait 15-minutes or longer and then re-torque all nuts.

7th – Using your hands only, butt the loose barrel ring nuts against the barrel ring.

17. Drive all radial gripper bolts of both glands inwards so that they just touch the pipe. Apply no amount of torque to do this. No special pattern is required to do this.
18. In a star bolting pattern torque the gripper bolts to 50 ft-lbs on each gland, then 80 ft-lbs each gland, and then finally to 100 ft-lbs each gland.
19. Wait 15-minutes or longer and then re-tighten all gripper bolts.

20. **THE COUPLING AND PIPES MUST BE FIRMLY SUPPORTED PIOR TO PRESSURE TESTING. CAREFULLY BACK FILL COMPLETELY OR COMPLETELY COVER THE COUPLING AND PIPE TO THE MINIMUM DISTANCE "X" FROM THE MIDPOINT OF THE COUPLING. CONTACT ROBAR SHOULD THIS NOT BE POSSIBLE.**

21. Pressure test.

Pipe Size	"X"
12" to 24"	5-feet
Greater than 24"	10-Feet