4 ASSEMBLY INSTRUCTIONS

4.1. BASIC ASSEMBLY

The basic operations for the joining of threaded fittings and steel pipes are:

- Secure the pipe: the pipe must be secured at every moment in order to avoid deformations in the tightening (pipes that are very long will require additional support)

- Cut of the pipe: this must be made perpendicular to the axis of the pipe.

- Threading of the pipe. The following have to be taken into account:

  • The thread (male) will be initiated in an extreme perpendicular to the axis.

  • The oil to be used is appropriate :

    - Good lubrication and refrigeration capabilities.
    - Good solubility in water. (in order to be removed) .
    - It is not contaminating.

  • Centring the threads.
  • The diameter of the threads is adequate, for which the use of standardised calibrated alloys is necessary. (EN 10226-3)

- Curvature of the pipe. The following aspects need to be taken into account:

  • Steel pipes with a DN superior to 50 (2 inches) should not be bent.
  • The curving process must always be carried out in cold temperatures.
  • In soldered pipes, the soldering must be in the upper part so that its reaction can be observed.
  • The length of the starting straight pipe is adequate.

- Assembling the joint: to ensure the sealing of the joint, the following aspects need to be taken into account:

  • Remove any shavings or foreign bodies in the interior and exterior of the pipe and in the fitting.
  • Assure that both fittings are free from foreign bodies (shavings, dirt, dry oil,..).
  • Apply the liquid or solid sealing material (Teflon, hemp, hemp paint, etc.) to the male thread in a homogenous and thorough way (if it is a solid, it should follow the direction of the threads).
  • During the manual assembly, assure that the longitudinal axes are aligned adequately.

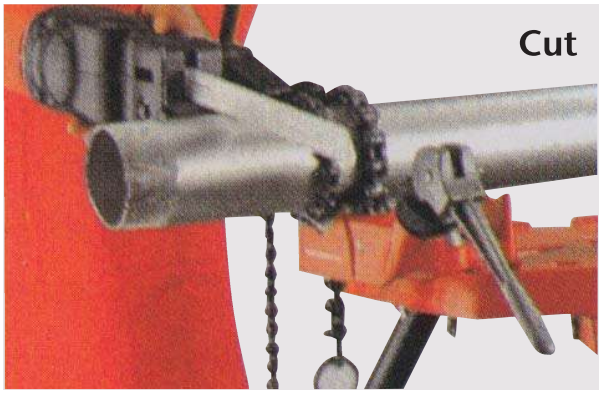
- Tightening of the joint: the following aspects need to be taken into account:

  • Apply the appropriate torque.

DIAMETER		APPROXIMATE TURQUE (Nm)
3/8	DN 10	65
1/2	DN 15	65
3/4	DN 20	125
1	DN 25	125
1 1/4	DN 32	185
1 1/2	DN 40	185
2	DN 50	245
2 1/2	DN 65	245
3	DN 80	245
4	DN 100	300

  • After the final tightening, remove those unions where the washout thread has been used.


Securing


Cut


Threading


Ring gauges


Bender


Reamer