Some notes about TIGHTENING TORQUE

The setting of the tightening torque which, once set, changes very little over the years. After 10 years, this torque may have dropped by, at most, a couple of per cent. The set torque does not have to be inspected regularly. Inspection using a torque meter as shown in the photograph alongside, requires a great deal of skill if result is to be correct. It is necessary to remember the following:
1. The speed is of great significance. Using a low speed it is possible to turn a new valve through half a revolution without exceeding the recommended torque.
2. Extra tightening through about 45° results in an increase of from 20 to 100 Nm. This must not be forgotten (see graph below).
3. The distance ‘a’ must be almost 0. If it is 30 - 40 cm, the resulting error can be about 20 Nm.

This graph shows how the tightening torque increases over 2 1/2 revolutions. The brass valve in this case is new and has three rounds of 25 mm wide PTFE tape. The cylinder is of steel.

An old valve is "harder" than a new one. The torque therefore increases more quickly when the limit position switch has switched off. This means that an old valve is automatically tightened to a torque that is one or somewhat higher than a new one. This is just what most customers wish - at least in the case of steel cylinders.