



## **POLAR CLAMPS AS MAINTENANCE AND USER MANUAL**

### **for Standard and Slick Pioneer Clamps**

**Document name:** Polar Clamp User Manual NiAlBr  
**Document number:** PCUM NiAlBr  
**Document revision number:** 05  
**Issued by:** Torstein Olsen  
**Date of issue:** 07.01.2011  
**Approved by:** Helge Olsen  
**Date of approval:** 07.01.2011

#### **Equipment to use during installation.**

- Air driven nut wrench with ½” drive and adjustable torque area e.g. 50-400Nm.
- ½” drive socket 6 point; 24mm for M16 center bolt / 30mm for M20 center bolt
- 2pcs. safety sling made of carbine hooks Ø5mm x 2 and approx 1 meter with Ø5mm wire.

#### **Installing the clamp.**

1. Attach both safety slings in one end to a fixed point with the carbine hooks.
2. Attach the nut wrench to one of the safety slings with the carbine hook.
3. Attach the other safety sling with the carbine hook to the hinge bolt of the clamp.
4. Loosen the center bolt totally. (The bolt cannot be removed from the clamp halve)
5. Apply suitable lubricant to the center bolt.
6. Open the clamp. (The clamp halves are held together by the hinge bolt.)
7. Fit the clamp around guideline and umbilical.
8. Tighten the center bolt to recommended torque.
9. Remove the carbine hook from the clamp.

#### **Torque values.**

Recommended torque: 80-150Nm

Maximum torque: 200Nm

The recommended torque will depend on the state of the umbilical, air temperature and friction of the bolt.

#### **Maintenance.**

Pioneer Clamps are made of very corrosion resistant materials and therefore needs a minimum of maintenance.

- After use the clamps should be cleaned e.g. with a high pressure washer.
- The bolt and nut should be applied with a suitable lubricant.
- Check for any damage.

**POLAR CLAMPS AS**  
**Org. No:**  
975 892 816 VAT

**Visiting address:**  
Arnebyvegen 22  
7024 Trondheim  
Norway

**Phone:** +47 72 55 56 79  
**Mobil.** +47 91 64 08 43  
**Fax:** +47 72 55 23 80

**E-mail:** [post@polarclamps.no](mailto:post@polarclamps.no)  
**Web:** [www.polarclamps.no](http://www.polarclamps.no)