

Recommended Field Running Procedure for MO-3TP Connections

Rev. 0: Document issued for new connection.

1. IDENTIFICATION

MO-3TP is a threaded & coupled connection and has features as below

- The size line-up of MO-3TP is 16" to 20".
- The thread of MO-3TP is robust thread height and steep taper.
- 3TPI prevents cross-thread, and steep taper realizes quick make-up.
- MO-3TP pins have a special nose detail, and the pin noses will touch each other when properly made-up.

2. RUNNING

2.1 RUNNING PREPARATION

- Always use a stabbing guide.
- Use thread compound recommended in Appendix-A, uncontaminated and thoroughly stirred unless customer specifies special thread compound.
- Ensure the tong hangs horizontally.
- Check for correct alignment of travelling block and rotary (see 2.4 Stabbing).

2.2 THREAD INSPECTION

Ensure that the connections are thoroughly clean and dry.

Visually check that the connections are free from burrs or tears and have a relatively even thread surface.

A "mash" on the pin or box is unacceptable.

2.3 THREAD COMPOUND (DOPE)

Prior to stabbing a moderate coating of thread compound should be applied to the pin and box connections.

The dope should be applied uniformly to all of the threads using a soft brush.

2.4 STABBING

With the joint hanging freely in the derrick – check the vertical alignment to ensure the pin is directly over the box.

True vertical alignment either with a stabber, stabbing arm or with the blocks must be maintained during MU operations. Apply the stabbing guide to the box connection in the rotary. Lower the pipe slowly into the box connection to avoid damaging the threads. After stabbing-in remove the stabbing guide and ensure the pipe remains vertically aligned.

2.5 POWER MAKE-UP

Engage the power tong at least 10 cm above the thread run-out area on the pin to ensure that the dies do not contact the coupling face as the make-up loss is absorbed.

If a back-up tong is used it should never be placed directly on the coupling, but always under the coupling.

Ensure the tong back-up line is at 90 degrees to the tong and pipe axis (both vertical and horizontal).

Ensure the elevators are not supporting any of the pipe weight.

Using the power tong, make-up the connection at a speed of not more than 25 rpm, and ensure that the tong does not slip during the make-up operation and damage the pipe body.

Torque build up does not normally start until 4 or 5 complete turns are obtained and then torque will gradually build up until the two pin noses contact, at which point the torque will increase very rapidly and a torque "spike" will be seen on the torque gauge.

Make-up the connection to the correct torque & position with the aid of a torque gauge and confirm that the make-up is acceptable in accordance with the criteria in 2.6.

2.6 ACCEPTANCE CRITERION FOR MAKE-UP

Recommended torque values are shown in APPENDIX-A.

When higher-friction-factor thread compound is used for field running instead of the recommended ones written in this procedure, following conversion shall be applied.

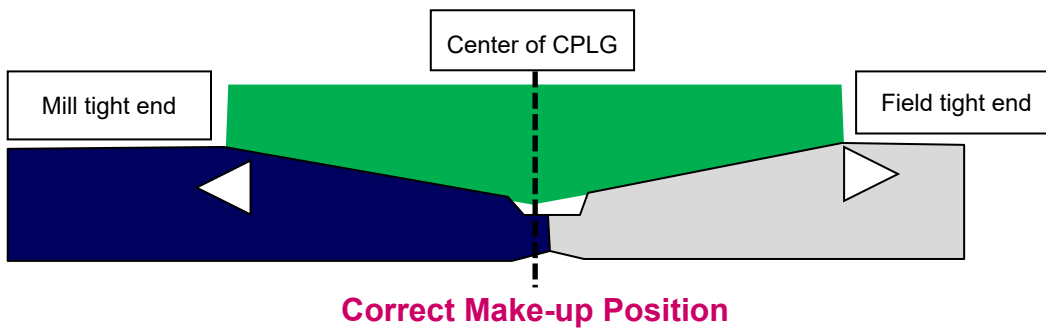
Friction Factor (FF)*	Conversion Coefficient	Conversion of Recommended Torque	
0.8 <= FF <= 1.2	1.0	No conversion is needed.	
1.2 < FF	FF minus 0.2	If FF is 1.5	Converted MUT shall be 1.3 x MO Recommended MUT.
		If FF is 2.0	Converted MUT shall be 1.8 x MO Recommended MUT.
		If FF is 2.5	Converted MUT shall be 2.3 x MO Recommended MUT.

* Friction Factor is relative to API RP 5A3

Torque should be set at Min. Torque and if no shouldering occurs the torque should be increased accordingly up to Max. Torque.

Connection make-up is considered successful if all of the following criteria are achieved.

- The two pin noses contact which is indicated on the torque dial gauge as a very sudden increase in torque (“spike”)
- The base of the 3/8” triangle stamp on the pipe body is aligned with the coupling face.



3. PULLING

The equipment required for pulling is basically the same as running.

Back-up tong should be placed on the lower half of the coupling. Use of the rig tongs for this operation is not recommended. If back-up tong is not available, then please ensure the CPLG mill-end side does not rotate and a paint line gives a useful indication.

True vertical alignment either with a stabber, stabbing arm or with the blocks must be maintained during break out operation.

Engage the power tong at the same area of the pipe as make-up. Break out the connection using controlled torque - do not “jerk”. Rotation speed during break out and spinning out should not exceed 15 rpm. Once the threads have disengaged, the pin will “bump” in the box, rotate 1/3 of a turn before lifting out the pipe.

When lifting out, care should be taken to ensure the threads are fully disengaged to prevent jump out.

Use of a stabbing guide will help protect the pin and may assist in the lifting of the pipe out of the box.

4. MINOR DAMAGE ON THE THREADS

Light imperfections/corrosion on the threads is acceptable. Minor damage to pin end threads such as burrs can be repaired with a fine file, hone or emery paper.

APPENDIX-A MO-3TP RECOMMENDED TORQUE AT FIELD END FOR REGULAR COUPLING (W)

1. RECOMMENDED TORQUE (ft-lb)

OD	Weight	WT	J/K55			N/L80			P110		
Inch	lbs/ft	inch	Min	Max	Operational. Max.	Min	Max	Operational. Max	Min	Max	Operational. Max.
16"	65.0	0.375	15,600	19,000	42,000	18,300	22,300	49,300	24,700	30,100	66,600
	75.0	0.438	22,900	27,900	61,600	27,100	33,100	73,000	36,900	45,100	99,500
	84.0	0.495	26,000	31,800	70,300	30,900	37,700	83,200	41,900	51,300	113,200
	94.5	0.562	31,300	38,300	84,600	37,200	45,400	100,300	50,800	62,000	137,000
	109.0	0.656	41,100	50,300	111,000	49,100	60,000	132,300	67,400	82,400	181,900
18-5/8"	87.5	0.435	21,800	26,600	68,700	25,800	31,600	81,200	35,000	42,800	110,200
	94.5	0.468	26,300	32,100	82,700	31,100	38,100	97,900	42,400	51,800	133,500
	112.0	0.579	38,000	46,400	119,400	45,200	55,200	142,200	62,100	75,900	195,400
	126.0	0.636	45,000	55,000	141,600	53,700	65,700	169,100	74,000	90,400	233,000
20	94.0	0.438	18,600	22,800	70,400	22,100	27,000	83,400	30,200	36,900	113,700
	106.5	0.500	26,200	32,000	98,800	31,100	38,100	117,700	42,800	52,400	161,800
	133.0	0.635	42,000	51,400	158,900	50,400	61,600	190,500	69,900	85,500	264,200

Note 1: Operational Max. Torque can be applied for following cases.

- 1) If actual MUT exceeds Max. Torque in the Torque table, MU is acceptable as long as torque is lower than Ope. MAX.
- 2) If higher torque is required than Max. Torque, MUT may be increased within Operational Max. Torque.

Note 2: The following simple calculation is required to the material grade not stipulated in the table above.

MATERIAL GRADE	ACTION
85 ksi	Same as N/L80 grade
90 ksi	Torque for N/J80 times 1.1
95 ksi	Same as P110 grade
125 ksi	Torque for P110 times 1.1

2. THREAD COMPOUND (DOPE) RECOMMENDED

- 1) API Modified
- 2) Bestolife 2000 series
- 3) Topco TK-II for thermal application