NIPPON STEEL

NSMAX™-GR

Recommended Running Manual

Revision	Date	Reason
0	2018.10.01	Creation
1	2019.07.26	Company name is corrected.
2	2021.01.29	Erratum of make-up torque table is corrected.
3	2021.06.30	Stabbing and make up rotation speed is revised.
4	2022.06.06	Requirement for power tong and use of stabbing guide are added.
5	2026.03.31	Clarified the content. Added the table of thread compound volume for applying with the thread locking compound. Modified the density of the thread compound according to the latest information provided by the thread compound manufacture.

1. Remarks

This Manual describes the procedure to be followed for running NSMAX™-GR.
Prepare the latest version of "NSMAX_TM-GR-FIP" for visual inspection of unused PIN & BOX.

2. Preparation

2.1 Use of following Equipment

(1) Power-tong with torque & turn recording system
(2) Power-tong with back-up tong is preferable.

2.2 The following items shall be prepared

(1) Thread compound (API modified compound or NSC approved HOCNF yellow compound)
(2) Moustache type brush (to apply compound), Wire brush is prohibited
(3) Stabbing guide

3. Running

3.1 Running procedure

(1) Remove the Coupling (hereinafter, "CPLG") protector
(2) Inspect BOX according to the latest version of "NSMAX_TM-GR-FIP".
(3) Raise pipe to vertical position
(4) Remove the PIN protector
(5) Inspect PIN according to the latest version of "NSMAX_TM-GR-FIP".
(6) Minimize the offset(misalignment) between PIN & BOX
(7) Install the stabbing guide on the BOX end
(8) Stab the PIN slowly into the BOX
(9) Start make-up according to para. "3.5 Recommendation for stabbing and make up rotation speed"

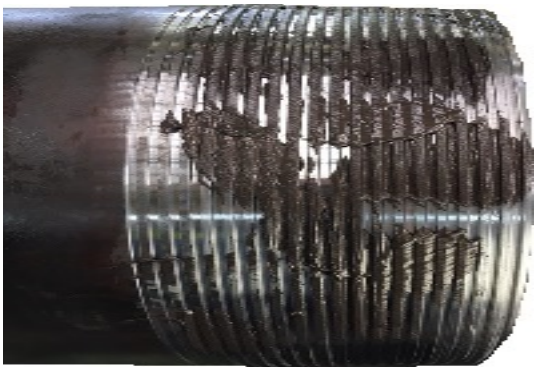
Note1: Running compound may already be applied on the connection at mill. If not, the storage compound is cleaned off and dried, and the running compound is applied on both PIN & BOX.
Note2: To avoid the damage to the threads or phosphating, the inner surface of the CPLG should not be hooked or grabbed. If it is necessary to do so, make sure to cover the area with a dry, soft cloth or a similar material.

3.2 Thread compound (NSC approved running compound)

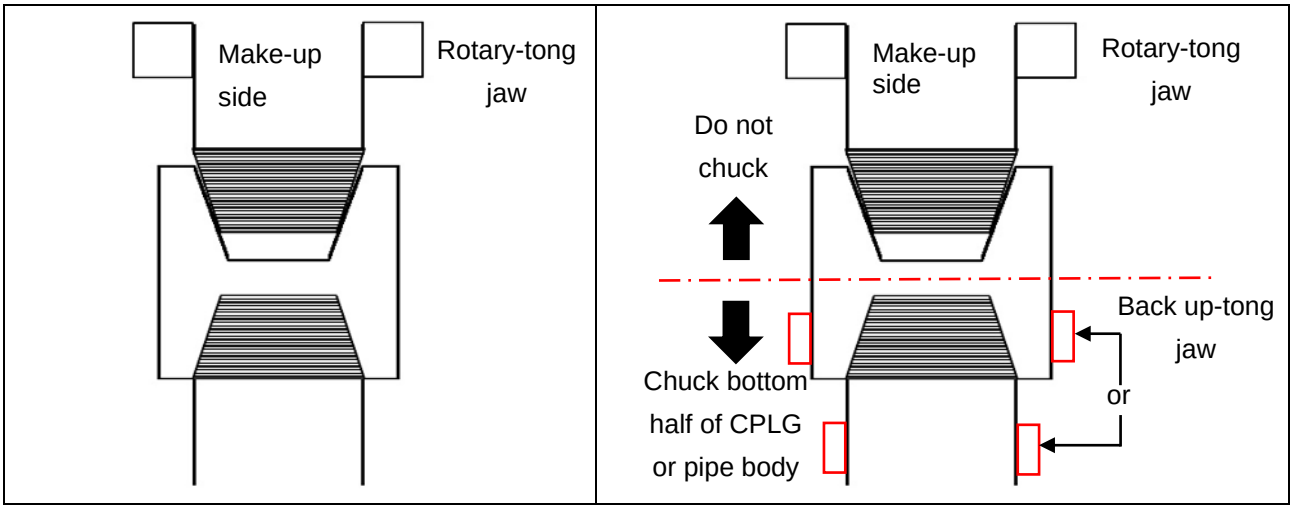
API Modified thread compound, or (as yellow dope) Jet Lube HPHT, Jet Lube Run N Seal ECF
Refer to the appendix for the volume/quantity of thread compound.

Other thread compounds (especially red or yellow thread compounds) may be used.
Please contact NSC.

Ratio of total thread compound volume = 40% to 50% on PIN, 50% to 60% on CPLG
Thread compound must be applied uniformly to thread as bellow fig.

	
Too little	Too much
	
Just right PIN	Just right CPLG

3.3 Jaw chucking position



3.4 Make-up torque

Make-up torque table of 55 ksi grade

Size			Make-up Torque (ft.lb.)			Make-up Torque (N.m.)		
OD (inch)	Weight (lb/ft)	Wall Thickness	Min.	Opt.	Max.	Min.	Opt.	Max.
18	94	0.500 inch 12.70 mm	15,570	17,300	19,030	21,120	23,460	25,810
	105	0.562 inch 14.27 mm	17,190	19,100	21,010	23,310	25,900	28,490
	117	0.625 inch 15.88 mm	23,850	26,500	29,150	32,340	35,930	39,530
	119	0.640 inch 16.26 mm	24,390	27,100	29,810	33,070	36,750	40,420
	128	0.688 inch 17.48 mm	25,920	28,800	31,680	35,150	39,050	42,960
18-5/8	87.5	0.435 inch 11.05 mm	14,850	16,500	18,150	20,140	22,380	24,610
	94.5	0.468 inch 11.89 mm	14,940	16,600	18,260	20,260	22,510	24,760
	96.5	0.486 inch 12.34 mm	15,570	17,300	19,030	21,120	23,460	25,810
	101	0.510 inch 12.95 mm	16,290	18,100	19,910	22,090	24,550	27,000
	106	0.531 inch 13.49 mm	16,920	18,800	20,680	22,950	25,490	28,040
	109.4	0.563 inch 14.30 mm	17,730	19,700	21,670	24,040	26,710	29,390
	112	0.579 inch 14.71 mm	22,950	25,500	28,050	31,120	34,580	38,040
	115	0.594 inch 15.09 mm	23,580	26,200	28,820	31,980	35,530	39,080
	122	0.636 inch 16.15 mm	25,290	28,100	30,910	34,290	38,100	41,910
	136	0.693 inch 17.60 mm	27,360	30,400	33,440	37,100	41,220	45,340
20	94	0.438 inch 11.13 mm	15,750	17,500	19,250	21,360	23,730	26,100
	106.5	0.500 inch 12.70 mm	16,650	18,500	20,350	22,580	25,090	27,600
	117	0.563 inch 14.30 mm	18,540	20,600	22,660	25,140	27,930	30,730
	133	0.635 inch 16.13 mm	26,370	29,300	32,230	35,760	39,730	43,700
	144	0.693 inch 17.60 mm	28,440	31,600	34,760	38,560	42,850	47,130

Make-up torque table of 95 ksi grade

Size			Make-up Torque (ft.lb.)			Make-up Torque (N.m.)		
OD (inch)	Weight (lb/ft)	Wall Thickness	Min.	Opt.	Max.	Min.	Opt.	Max.
18	94	0.500 inch 12.70 mm	25,470	28,300	31,130	34,540	38,370	42,210
	105	0.562 inch 14.27 mm	28,170	31,300	34,430	38,200	42,440	46,690
	117	0.625 inch 15.88 mm	36,090	40,100	44,110	48,940	54,370	59,810
	119	0.640 inch 16.26 mm	36,900	41,000	45,100	50,030	55,590	61,150
	128	0.688 inch 17.48 mm	39,240	43,600	47,960	53,210	59,120	65,030
18-5/8	87.5	0.435 inch 11.05 mm	24,930	27,700	30,470	33,810	37,560	41,320
	94.5	0.468 inch 11.89 mm	25,110	27,900	30,690	34,050	37,830	41,620
	96.5	0.486 inch 12.34 mm	25,290	28,100	30,910	34,290	38,100	41,910
	101	0.510 inch 12.95 mm	26,460	29,400	32,340	35,880	39,870	43,850
	106	0.531 inch 13.49 mm	27,450	30,500	33,550	37,220	41,360	45,490
	109.4	0.563 inch 14.30 mm	28,890	32,100	35,310	39,170	43,530	47,880
	112	0.579 inch 14.71 mm	39,150	43,500	47,850	53,090	58,980	64,880
	115	0.594 inch 15.09 mm	40,140	44,600	49,060	54,430	60,470	66,520
	122	0.636 inch 16.15 mm	40,140	44,600	49,060	54,430	60,470	66,520
	136	0.693 inch 17.60 mm	40,680	45,200	49,720	55,160	61,290	67,420
20	94	0.438 inch 11.13 mm	27,630	30,700	33,770	37,470	41,630	45,790
	106.5	0.500 inch 12.70 mm	27,900	31,000	34,100	37,830	42,040	46,240
	117	0.563 inch 14.30 mm	30,960	34,400	37,840	41,980	46,650	51,310
	133	0.635 inch 16.13 mm	40,500	45,000	49,500	54,920	61,020	67,120
	144	0.693 inch 17.60 mm	40,770	45,300	49,830	55,280	61,420	67,570

3.5 Recommendation for stabbing and make up rotation speed

Overview

To ensure the NSMAX™ self-aligning feature works effectively, proper stabbing and initial spin-in are essential.

This is especially important when working in offshore operations with unstable rig floor movement.

Before inserting the PIN into the BOX, ensure proper axial alignment to minimize the risk of cross threading.

The recommended misalignment tolerance is less than 1 degree or 8 inches (20 cm) over a 40-foot length.

※Refer to the illustration on page 6 for visual guidance.

Use a stabbing guide and begin with a gentle counter-rotation at around 1 RPM to allow smooth thread engagement.

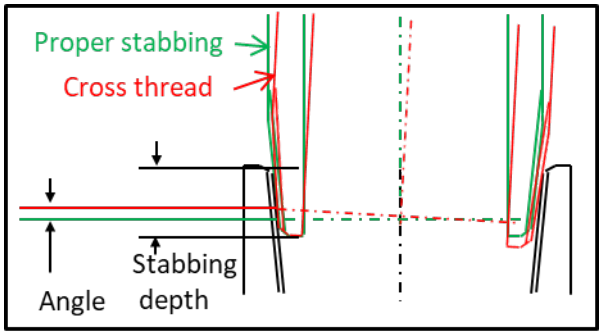
Avoid excessive speed during spin-in and make-up to maintain connection integrity and proper torque control.

Step-by-Step Procedure

Step	Operation Phase	Gear Selection	Recommended RPM	Key Instructions / Notes
1	Stabbing & Initial Spin-In	High Gear	≤ 4 RPM (start at ≤1 RPM)	Use a stabbing guide. Begin with gentle counter-rotation to engage threads. Once threads drop in smoothly, switch to clockwise rotation to continue the make-up.
1a	If cross threading occurs	High Gear	≤1 RPM	Back off the connection and repeat the spin-in. If cross threading is still observed at 1 RPM, counter-rotate the pipe until threads drop in smoothly.
2	Running-In	High Gear	≤ 8 RPM (Max 15 RPM)	Maintain steady rotation. Monitor torque increase. Do not exceed 15 RPM.
3	Final Turn of Make-Up	Low Gear	≤ 4 RPM	Apply the recommended dump torque as the optimum torque. Ensure final torque is within specified limits. To avoid exceeding the maximum torque, reduce the rotation speed. If the final torque exceeds the maximum limit, break out fully and inspect the threads. (Refer to para. “4. Make-up chart”)

≪reference≫

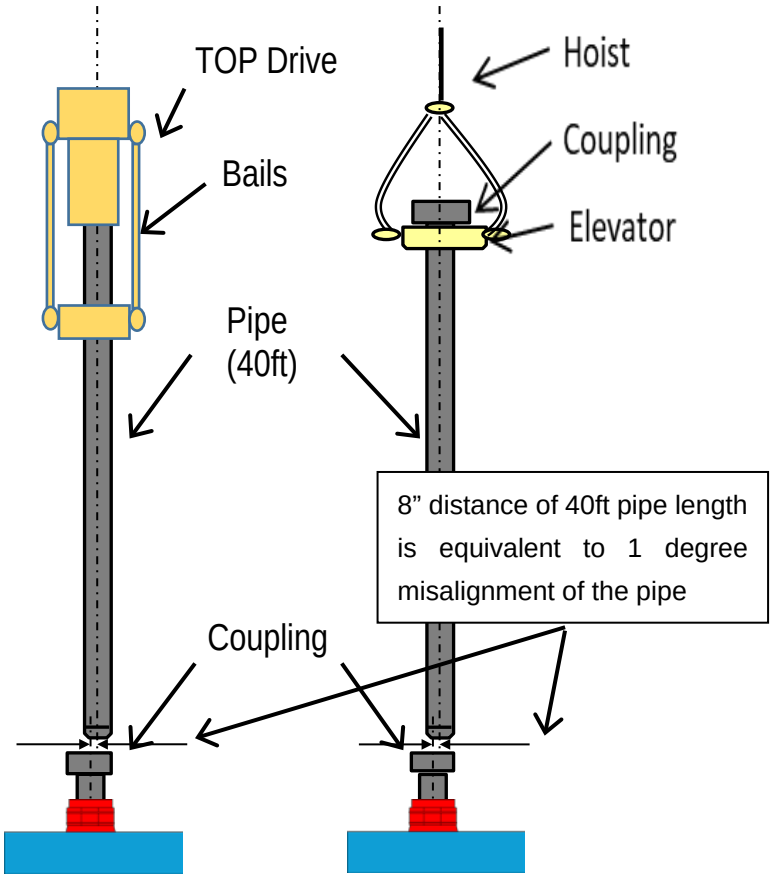
(1) Cross thread angle



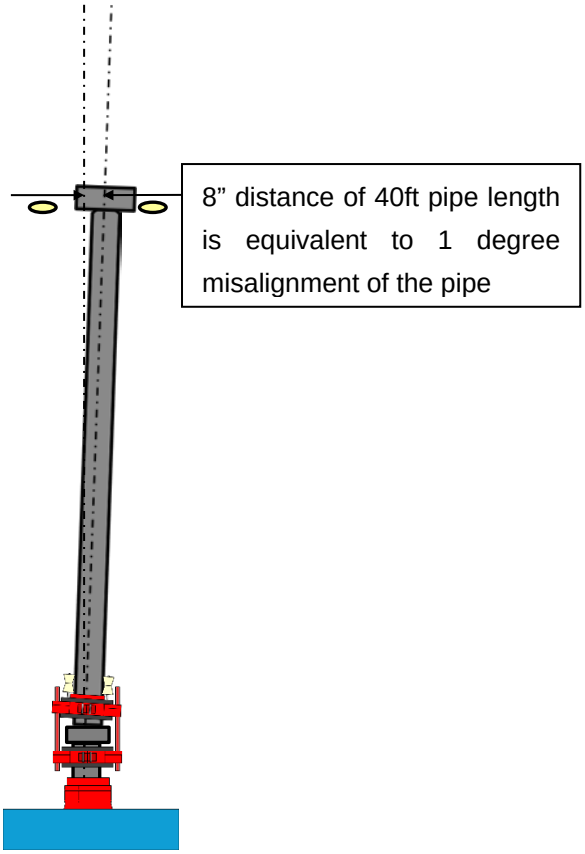
	T.P.I.	O.D.(inch)	
		20	18 5/8
Cross thread angle (degree)	3 threads /inch	0.96	1.03
	5 threads /inch	0.57	0.62

Cross thread angle is around 1 degree for 18-5/8” and 20” NSMAX™-GRC

(2) The misalignment angle of the pipe of cross thread



The misalignment angle of the pipe at the stage of stabbing



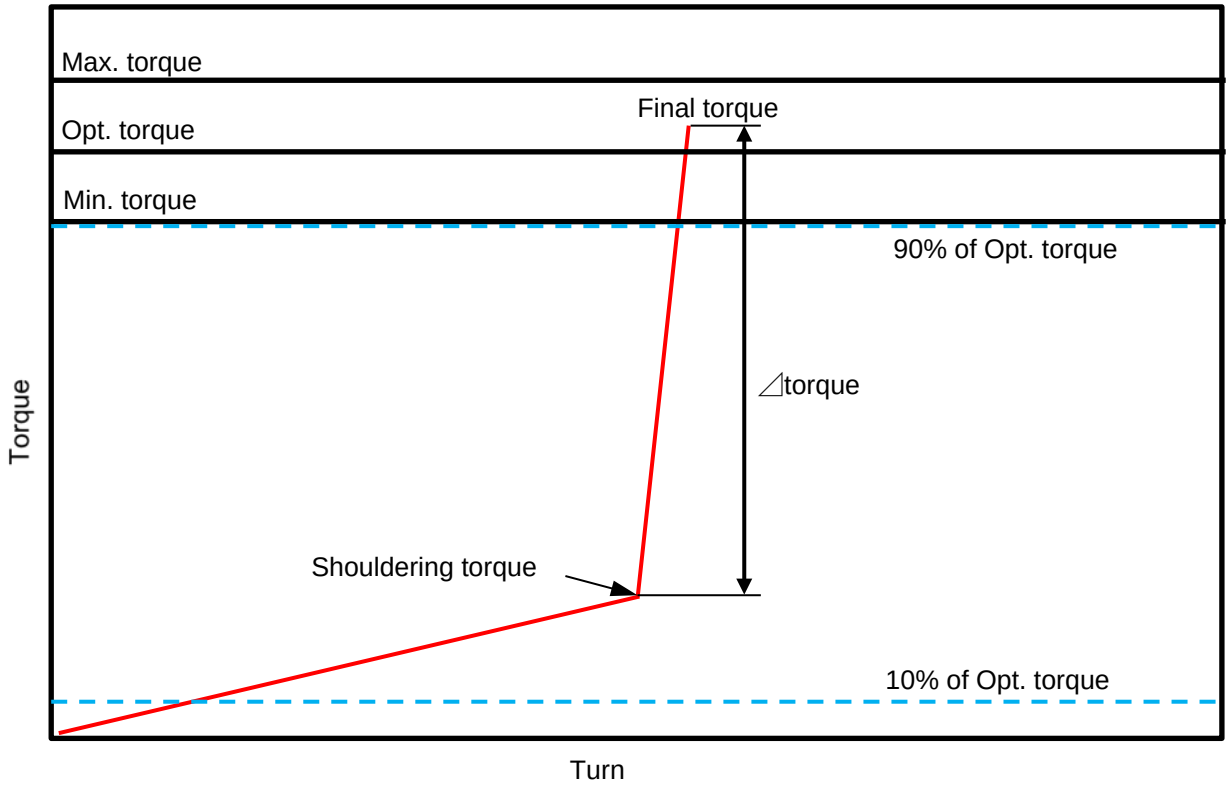
The misalignment angle of the pipe at the stage of half turn rotation after stabbing (Cross thread)

3.6 Max allowable grip mark

Max allowable	Pipe body	CPLG
Grip mark depth	0.6mm	0.6mm

4. Make-up chart

4.1 Make-up chart acceptance criteria



When make-up chart meets following standards, make-up is accepted.

(1) Final torque must be between Min. torque and Max. torque.

(2) Shouldering torque must be between 10% of Opt. torque and 90% of Opt. torque.

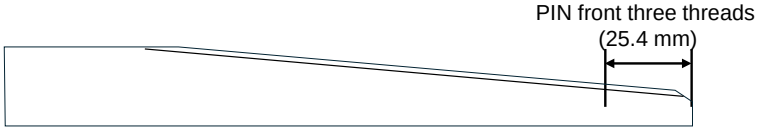
(3) ⊿toque ≧ 5% of Opt. torque

If make-up chart was unacceptable (refer to para. “4.2 Unacceptable make-up chart”), Break-out fully and inspect the thread and the coating. Applied the following procedure depending on damage.

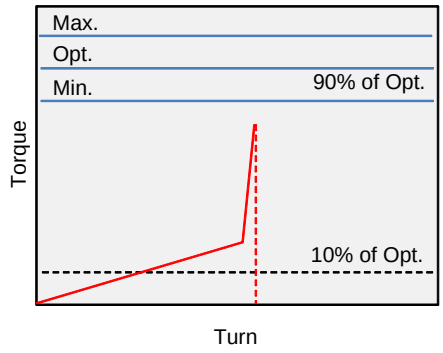
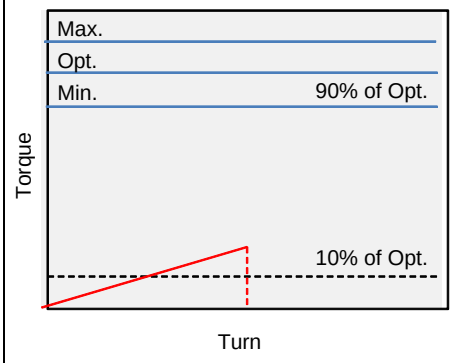
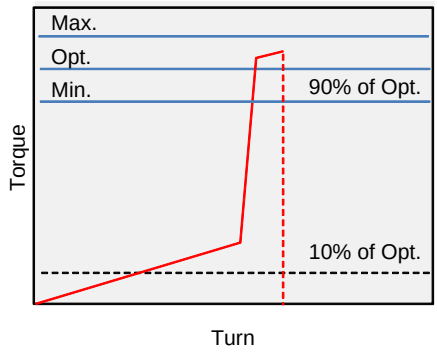
BOX/ PIN

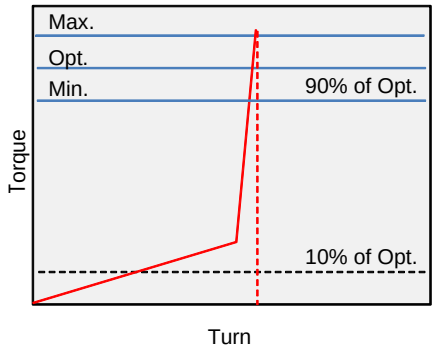
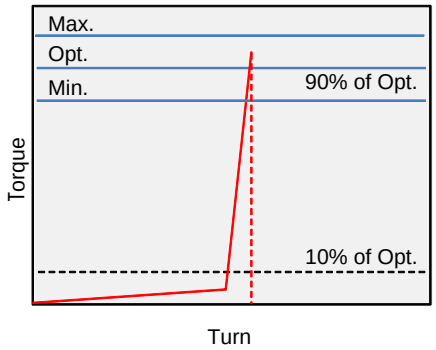
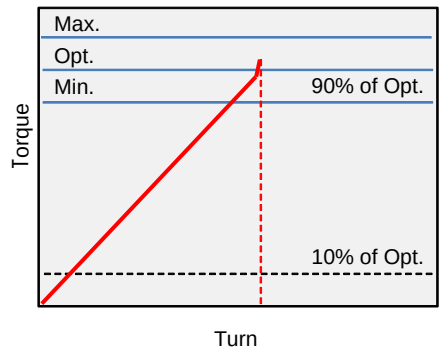
For this thread-seal type connection, field repair on full threads should generally be avoided. To prevent operational interruptions on the rig floor, repair on PIN front three threads (25.4mm), which are outside the thread-seal area, is acceptable.

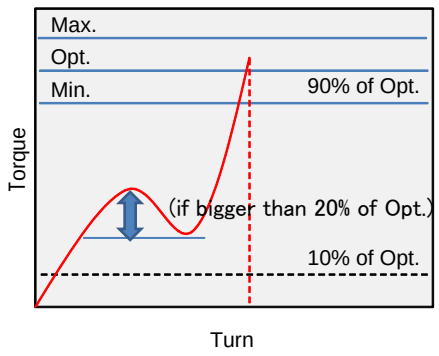
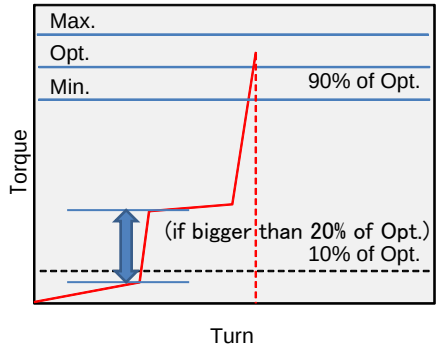
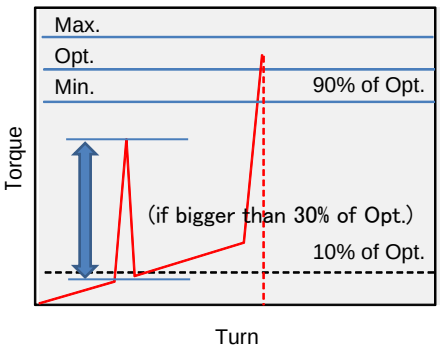
Repairs on other thread areas are not recommended; however, very minor dressing may be permitted at the inspector’s discretion, limited to light damage (e.g., minor or partial galling, scratches, indentations, knocks), completed within about five minutes per joint, and without altering the original profile.



4.2 Unacceptable make-up chart

Unacceptable make-up graph	Possible Causes	Consequences	Remedial Actions
Low Final Torque with shoulder contact 	1. Wrong dump valve setting 2. Unable to select low gear 3. Operator stopped make-up	1. Risk of back out 2. Risk of leak	1. Breakout fully 2. Clean and inspect threads 3. If OK, remake
Low final torque with no shoulder contact 	1. Wrong dump valve setting 2. Unable to select low gear 3. Operator stopped make-up	1. Risk of back out 2. Risk of leak	1. Break out fully 2. Clean and inspect threads 3. If OK, remake
Yielding / Plastic deformation 	1. Bad load cell calibration 2. Wrong torque values entered 3. Mixing interchangeable connection with big difference in weight or grade 4. Wrong connection types	1. Risk of jump in 2. Risk of coupling parting 3. Risk of leak 4. No drift –damage to pin and box shoulder area	1. Break out fully 2. Clean threads 3. Visual inspect counter bore for deformation 4.If OK, remake

High final torque 	1. Bad load cell calibration 2. Wrong dump valve setting	1. Risk of coupling parting	1. Break out fully 2. Clean threads 3. Visual inspect counter bore for deformation 4. If OK, remake to correct torque
Low shoulder torque or no shoulder torque 	1. Friction factor <1.0 2. Wrong type of thread compound 3. Compound not stirred 4. Compound too hot 5. Compound contaminated 6. Wrong torque values 7.Wrong connection types	1. Risk of back out 2..Risk of leak	1. Break out fully 2. Clean and inspect threads 3. If OK, remake
High shoulder torque or no shoulderling 	1. Wrong type of thread compound 2. Not enough thread compound 3. Compound too cold 4. Compound not stirred 5. Friction factor >1.0 6. Girt/dirt in thread compound 7. Bad load cell calibration 8. Wrong torque values 9. Wrong tong arm setting 10. Misalignment between pin and box 11. Threads not clean 12. Threads galled 13. Threads damaged 14.Wrong connections	1. Risk of leak 2. Risk of threads galling	1. Break out fully 2. Clean and inspect threads 3. If OK, remake

Humping (if bigger than 20% of Opt.) 	1.Too much thread compound 2.Slight misalignment 3. Bad stabbing	1. Risk of threads galling	1. Break out fully 2. Clean and inspect threads 3. If OK, remake
Step in graph (if bigger than 20% of Opt.) 	1. Turns counter sticking	1. No immediate consequence but what happened during make up when turns were not recorded?	1. Partial break out 2. Acceptable but correct problem
Spike in graph (if bigger than 30% 0f Opt.) 	1. Late gear change 2. Radio interference (mobile phone or lightening) 3. Electrical interference caused	1. No consequence for connection	1. Break out fully 2. Clean and inspect threads 3. If OK, remake

5. Thread locking compound

If thread locking compound is required, the following processes have to be carried out.

5.1 Usage of thread locking compound

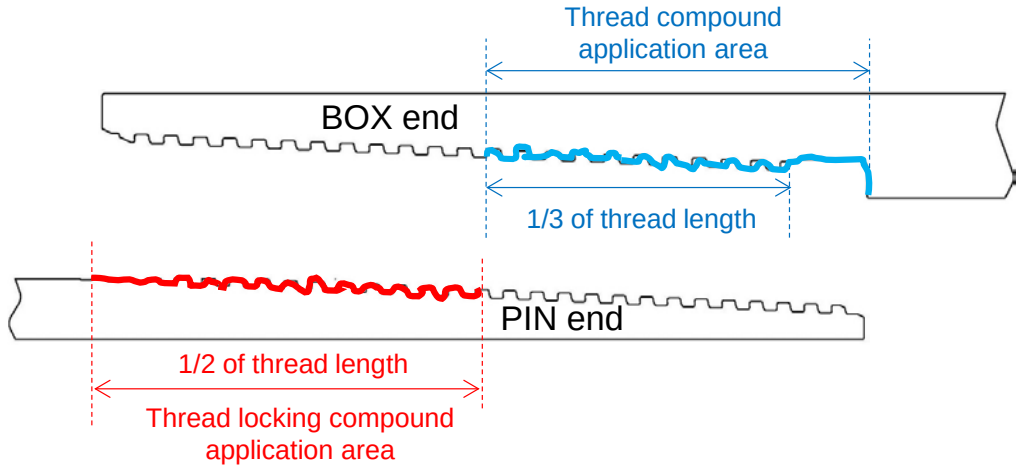
(1) Select a thread locking compound with a friction factor equal to or slight above 1.0.
Even if the friction factor is 1.0, the use of the higher optimum torque specified below is recommended.
(2) Set the new Optimum Torque to 1.3 times the normal Optimum Torque.
(3) Set the new Maximum Torque to 1.1 times the new Optimum Torque.
(4) Set the dump torque to the new Optimum torque.
(5) Apply thread compound to the CPLG shoulder and the firsts 1/3 of threads length
(6) Apply thread locking compound to the imperfect threads and the first perfect thread at the PIN end (1/2 of the thread length)
(7) Perform Make-up
Note1: If thread compound or thread locking compound is applied to an area shorter than specified above, galling may occur.
Note2: During Break-out of the CPLG engaged with thread compound, Break-out torque may be higher than 2 times the specified make-up torque.

5.2 acceptance criteria

⊿torque ≧ 20% of normal Optimum torque

For example, in the case of 18 5/8" x 101# NT-95DE NSMAX™-GR, use the torque value (ft.lbs) as shown below.

compound	Maximum Shoulder	Minimum Torque	Optimum Torque	Maximum Torque
Normal thread compound	23,520	26,460	29,400	32,340
Thread lock with FF≧1.0	⊿torque ≧ 5,880		38,220	42,042



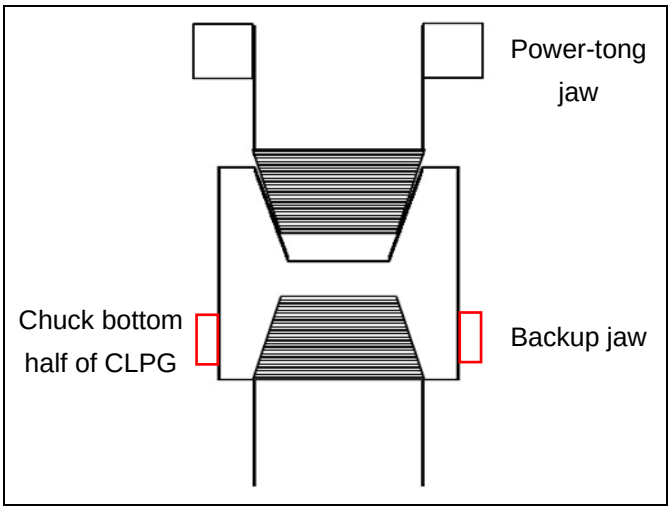
Refer to the appendix for the volume / quantity / application area of thread compound.

6. Break-out

6.1 Break-out procedure

(1) Minimize the offset(misalignment) between a rotary table hole & a casing elevator

(2) Chuck the Pipe & CPLG as below



(3) Start break-out 4turns in Low Gear

(4) Rotate PIN at 1RPM in High Gear until threads drop in

(5) Install the stabbing guide on the BOX end

(6) Pull the PIN slowly out BOX

7. Compatibility

NSMAX™-GR is compatible with NSMAX™-GRC as long as both have the same OD and WT.

		PIN (Field end)		
		GR	GRC	GR-PS
BOX (Field end)	GR	OK	OK(*1)	NG (*2)
	GRC	OK	OK	NG (*2)
	GR-PS	NG (*2)	NG (*2)	OK

Note *1: If NSMAX™-GRC PIN is connected to NSMAX™-GR BOX, the sealability of the combination is same with NSMAX™-GR.

Note *2: NSMAX™-GR-PS cannot be connected directly to others (GR or GRC).
Use a **X-over coupling** when connecting the two.

A rejected NSMAX™-GRC BOX due to coating loss can still be used as an NSMAX™-GR BOX.

8. Other documents for NSMAX™

If you need to check the other documents for NSMAX™, they are available for download at: https://www.tubular.nipponsteel.com/octg-connections/connection-list/nsmax-gr
or by scanning the QR code on the right. ➞

End of documents

Appendix

Volume of thread compound for Make-up

Size				Thread compound(ml)	
OD(")	Nominal weight (lb/ft)	Wall Thickness		minimum	Maximum
18	94	0.500	inch	120	180
		12.70	mm		
	105	0.562	inch	120	180
		14.27	mm		
	117	0.625	inch	150	230
		15.88	mm		
	119	0.540	inch	150	230
		13.72	mm		
	128	0.688	inch	150	230
		17.48	mm		
18-5/8	87.5	0.435	inch	130	200
		11.05	mm		
	94.5	0.468	inch	130	200
		11.89	mm		
	96.5	0.486	inch	130	200
		12.34	mm		
	101	0.510	inch	130	200
		12.95	mm		
	106	0.531	inch	130	200
		13.49	mm		
	109.4	0.563	inch	130	200
		14.30	mm		
	112	0.579	inch	150	230
		14.71	mm		
	115	0.594	inch	150	230
		15.09	mm		
	122	0.636	inch	150	230
		16.15	mm		
	136	0.693	inch	150	230
		17.60	mm		
20	94	0.438	inch	150	220
		11.13	mm		
	106.5	0.500	inch	150	220
		12.70	mm		
	117	0.563	inch	150	220
		14.30	mm		
	133	0.635	inch	170	250
		16.13	mm		
	144	0.693	inch	170	250
		17.60	mm		

The weight of thread compound to apply on a connection depends of the density of the used thread compound.

Appendix

Weight of API modified thread compound for Make-up
(Density= approximately 1.90g/cm^3)

Size				Thread compound(g)	
OD(")	Nominal weight (lb/ft)	Wall Thickness		minimum	Maximum
18	94	0.500	inch	228	342
		12.70	mm		
	105	0.562	inch	228	342
		14.27	mm		
	117	0.625	inch	285	437
		15.88	mm		
	119	0.540	inch	285	437
		13.72	mm		
	128	0.688	inch	285	437
		17.48	mm		
18-5/8	87.5	0.435	inch	247	380
		11.05	mm		
	94.5	0.468	inch	247	380
		11.89	mm		
	96.5	0.486	inch	247	380
		12.34	mm		
	101	0.510	inch	247	380
		12.95	mm		
	106	0.531	inch	247	380
		13.49	mm		
	109.4	0.563	inch	247	380
		14.30	mm		
	112	0.579	inch	285	437
		14.71	mm		
	115	0.594	inch	285	437
		15.09	mm		
	122	0.636	inch	285	437
		16.15	mm		
	136	0.693	inch	285	437
		17.60	mm		
20	94	0.438	inch	285	418
		11.13	mm		
	106.5	0.500	inch	285	418
		12.70	mm		
	117	0.563	inch	285	418
		14.30	mm		
	133	0.635	inch	323	475
		16.13	mm		
	144	0.693	inch	323	475
		17.60	mm		

The density of the thread compound shall be obtiained from the information provided by the threads compound manufacture(e.g. SDS or TDS).

Weight of Jet Lube HPHT for Make-up
(Density=1.36g/cm^3)

Size				Thread compound(g)	
OD(")	Nominal weight (lb/ft)	Wall Thickness		minimum	Maximum
18	94	0.500	inch	163	245
		12.70	mm		
	105	0.562	inch	163	245
		14.27	mm		
	117	0.625	inch	204	313
		15.88	mm		
	119	0.540	inch	204	313
		13.72	mm		
	128	0.688	inch	204	313
		17.48	mm		
18-5/8	87.5	0.435	inch	177	272
		11.05	mm		
	94.5	0.468	inch	177	272
		11.89	mm		
	96.5	0.486	inch	177	272
		12.34	mm		
	101	0.510	inch	177	272
		12.95	mm		
	106	0.531	inch	177	272
		13.49	mm		
	109.4	0.563	inch	177	272
		14.30	mm		
	112	0.579	inch	204	313
		14.71	mm		
	115	0.594	inch	204	313
		15.09	mm		
	122	0.636	inch	204	313
		16.15	mm		
	136	0.693	inch	204	313
		17.60	mm		
20	94	0.438	inch	204	299
		11.13	mm		
	106.5	0.500	inch	204	299
		12.70	mm		
	117	0.563	inch	204	299
		14.30	mm		
	133	0.635	inch	231	340
		16.13	mm		
	144	0.693	inch	231	340
		17.60	mm		

The density of the thread compound shall be obtiained from the information provided by the threads compound manufacture(e.g. SDS or TDS).

Appendix

Weight of Jet Lube Run N Seal ECF for Make-up
(Density=1.32g/cm^3)

Size				Thread compound(g)	
OD(")	Nominal weight (lb/ft)	Wall Thickness		minimum	Maximum
18	94	0.500	inch	158	238
		12.70	mm		
	105	0.562	inch	158	238
		14.27	mm		
	117	0.625	inch	198	304
		15.88	mm		
	119	0.540	inch	198	304
		13.72	mm		
	128	0.688	inch	198	304
		17.48	mm		
18-5/8	87.5	0.435	inch	172	264
		11.05	mm		
	94.5	0.468	inch	172	264
		11.89	mm		
	96.5	0.486	inch	172	264
		12.34	mm		
	101	0.510	inch	172	264
		12.95	mm		
	106	0.531	inch	172	264
		13.49	mm		
	109.4	0.563	inch	172	264
		14.30	mm		
	112	0.579	inch	198	304
		14.71	mm		
	115	0.594	inch	198	304
		15.09	mm		
	122	0.636	inch	198	304
		16.15	mm		
	136	0.693	inch	198	304
		17.60	mm		
20	94	0.438	inch	198	290
		11.13	mm		
	106.5	0.500	inch	198	290
		12.70	mm		
	117	0.563	inch	198	290
		14.30	mm		
	133	0.635	inch	224	330
		16.13	mm		
	144	0.693	inch	224	330
		17.60	mm		

The density of the thread compound shall be obtiained from the information provided by the threads compound manufacture(e.g. SDS or TDS).

Volume of thread compound for Make-up with Locking compound

Size				Thread compound		
OD(")	Nominal Weight (lb/ft)	Wall Thickness		application area (mm)	volume(mL)	
					minimum	Maximum
18	94	0.500	inch	64	50	80
		12.70	mm			
	105	0.562	inch	64	50	80
		14.27	mm			
	117	0.625	inch	70	60	100
		15.88	mm			
	119	0.640	inch	70	60	100
		16.26	mm			
	128	0.688	inch	70	60	100
		17.48	mm			
18-5/8	87.5	0.435	inch	64	55	90
		11.05	mm			
	94.5	0.468	inch	64	55	90
		11.89	mm			
	96.5	0.486	inch	64	55	90
		12.34	mm			
	101	0.510	inch	64	55	90
		12.95	mm			
	106	0.531	inch	64	55	90
		13.49	mm			
	109.4	0.563	inch	64	55	90
		14.30	mm			
	112	0.579	inch	70	60	100
		14.71	mm			
	115	0.594	inch	70	60	100
		15.09	mm			
	122	0.636	inch	70	60	100
		16.15	mm			
	136	0.693	inch	70	60	100
		17.60	mm			
20	94	0.438	inch	65	60	95
		11.13	mm			
	106.5	0.500	inch	64	60	95
		12.70	mm			
	117	0.563	inch	64	60	95
		14.30	mm			
	133	0.635	inch	70	65	105
		16.13	mm			
	144	0.693	inch	70	65	105
		17.60	mm			

The weight of thread compound to apply on a connection depends of the density of the used thread compound.

Appendix

Weight of API modified thread compound for Make-up with Locking compound (Density= approximately 1.90g/cm^3)

Size				Thread compound		
OD(")	Nominal Weight (lb/ft)	Wall Thickness		application area (mm)	quantity(g)	
					minimum	Maximum
18	94	0.500	inch	64	95	152
		12.70	mm			
	105	0.562	inch	64	95	152
		14.27	mm			
	117	0.625	inch	70	114	190
		15.88	mm			
	119	0.640	inch	70	114	190
		16.26	mm			
	128	0.688	inch	70	114	190
		17.48	mm			
18-5/8	87.5	0.435	inch	64	105	171
		11.05	mm			
	94.5	0.468	inch	64	105	171
		11.89	mm			
	96.5	0.486	inch	64	105	171
		12.34	mm			
	101	0.510	inch	64	105	171
		12.95	mm			
	106	0.531	inch	64	105	171
		13.49	mm			
	109.4	0.563	inch	64	105	171
		14.30	mm			
	112	0.579	inch	70	114	190
		14.71	mm			
	115	0.594	inch	70	114	190
		15.09	mm			
	122	0.636	inch	70	114	190
		16.15	mm			
	136	0.693	inch	70	114	190
		17.60	mm			
20	94	0.438	inch	65	114	180
		11.13	mm			
	106.5	0.500	inch	64	114	180
		12.70	mm			
	117	0.563	inch	64	114	180
		14.30	mm			
	133	0.635	inch	70	124	199
		16.13	mm			
	144	0.693	inch	70	124	199
		17.60	mm			

The density of the thread compound shall be obtiained from the information provided by the threads compound manufacture(e.g. SDS or TDS).

Weight of Jet Lube HPHT for Make-up with Locking compound
(Density=1.36g/cm^3)

Size				Thread compound		
OD(")	Nominal Weight (lb/ft)	Wall Thickness		application area (mm)	quantity(g)	
					minimum	Maximum
18	94	0.500	inch	64	68	108
		12.70	mm			
	105	0.562	inch	64	68	108
		14.27	mm			
	117	0.625	inch	70	82	136
		15.88	mm			
	119	0.640	inch	70	82	136
		16.26	mm			
	128	0.688	inch	70	82	136
		17.48	mm			
18-5/8	87.5	0.435	inch	64	75	122
		11.05	mm			
	94.5	0.468	inch	64	75	122
		11.89	mm			
	96.5	0.486	inch	64	75	122
		12.34	mm			
	101	0.510	inch	64	75	122
		12.95	mm			
	106	0.531	inch	64	75	122
		13.49	mm			
	109.4	0.563	inch	64	75	122
		14.30	mm			
	112	0.579	inch	70	82	136
		14.71	mm			
	115	0.594	inch	70	82	136
		15.09	mm			
	122	0.636	inch	70	82	136
		16.15	mm			
	136	0.693	inch	70	82	136
		17.60	mm			
20	94	0.438	inch	65	82	129
		11.13	mm			
	106.5	0.500	inch	64	82	129
		12.70	mm			
	117	0.563	inch	64	82	129
		14.30	mm			
	133	0.635	inch	70	89	142
		16.13	mm			
	144	0.693	inch	70	89	142
		17.60	mm			

The density of the thread compound shall be obtiained from the information provided by the threads compound manufacture(e.g. SDS or TDS).

Weight of Jet Lube Run N Seal ECF for Make-up with Locking compound (Density=1.32g/cm^3)

Size				Thread compound		
OD(")	Nominal Weight (lb/ft)	Wall Thickness		application area (mm)	quantity(g)	
					minimum	Maximum
18	94	0.500	inch	64	66	105
		12.70	mm			
	105	0.562	inch	64	66	105
		14.27	mm			
	117	0.625	inch	70	80	132
		15.88	mm			
	119	0.640	inch	70	80	132
		16.26	mm			
	128	0.688	inch	70	80	132
		17.48	mm			
18-5/8	87.5	0.435	inch	64	73	118
		11.05	mm			
	94.5	0.468	inch	64	73	118
		11.89	mm			
	96.5	0.486	inch	64	73	118
		12.34	mm			
	101	0.510	inch	64	73	118
		12.95	mm			
	106	0.531	inch	64	73	118
		13.49	mm			
	109.4	0.563	inch	64	73	118
		14.30	mm			
	112	0.579	inch	70	80	132
		14.71	mm			
	115	0.594	inch	70	80	132
		15.09	mm			
	122	0.636	inch	70	80	132
		16.15	mm			
	136	0.693	inch	70	80	132
		17.60	mm			
20	94	0.438	inch	65	80	125
		11.13	mm			
	106.5	0.500	inch	64	80	125
		12.70	mm			
	117	0.563	inch	64	80	125
		14.30	mm			
	133	0.635	inch	70	86	138
		16.13	mm			
	144	0.693	inch	70	86	138
		17.60	mm			

The density of the thread compound shall be obtiained from the information provided by the threads compound manufacture(e.g. SDS or TDS).