TSC™ Drill Pipe
A Division of Texas Steel Conversion, Inc.

CERTIFICATE of COMPLIANCE

WELLSITE RENTAL SERVICES
PURCHASE ORDER NUMBER
D2026-0126-13

SALES ORDER NUMBER
0126-13

SPECIFICATIONS (applicable parts):
API: 5DP 1st EDITION (08-01-10)

This hereby certifies that the herein described material meets the requirements of the above referenced documents.

WELLSITE RENTAL SERVICES STRING#: 13
SERIAL#s: 01-04

Spiral Drill collar
Φ247.65*76.2*9600±152.4mm NC70

V.P. QUALITY

12/01/2026
DATE

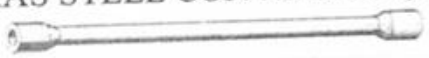
Batch number：0126-13

Steel grade：4145H

specifications：Φ247.65*76.2*9600±152.4mm NC70

Quantity ：		4 (pcs)	Total Length ：	(m)	Total Weighet：	12.52 (t)
Seriai No.	Pipe No.	Length	Weight	Heat No.	Lot No.	Remark
1	001	9532	3120,9	5024417B	0126-131	
2	002	9596	3141,9	5024417B	0126-131	
3	003	9556	3128,8	5024417B	0126-131	
4	004	9555	3128,4	5024417B	0126-131	
Total:		38239	12520			

TEXAS STEEL CONVERSION, INC.



MANUFACTURER/PROCESSOR OF OIL COUNTRY TUBULAR GOODS

MATERIAL CERTIFICATION

The herein described material has been manufactured or processed, sampled, tested, and inspected in accordance with the applicable API specifications and sales order requirements and meets the requirements for the grade indicated.

CUSTOMER: TSC DRILL PIPE/
WELLSITE RENTAL SVCS

SO# 0126-13

SIZE : 9 3/4"*3"
UPSET:

GRADE : 4145H

MFG.PROC.: SMLS

HEAT TREAT : Q&T
MILL: TSC/C.E. KING
SPEC: API:5DP
(Latest Edition)

PSL: 1

TEST#	# JTS	HEAT #	LOT #
106217	118	588804	057188
106218	200	587811	057189
106219	190	587811	057190

HEAT#	C	Si	Mn	P	S	Cr	Mo	Ni	V	Al	Nb	Sn	Ti	Cu	Ca	B
588804	.27	.21	.90	.006	.003	.97	.42	.12	.005	.036	.001	.011	.037	.13		.0016
587811	.26	.23	.88	.006	.004	.96	.40	.10	.005	.030	.001	.009	.032	.11		.0014
587775	.26	.23	.89	.010	.003	.95	.41	.10	.004	.037	.001	.011	.035	.13		.0015
588657	.27	.22	.89	.010	.002	.95	.40	.08	.004	.038	.001	.011	.036	.12		.0015

12/01/26
DATE

Alfred B. Cox
V.P.Quality

ABC/tp

3101 HOLMES ROAD • HOUSTON, TEXAS 77051-1199 • (713)733-6013 • FAX (713)733-9248

Instructions
247.65 x 76.2mm Spiral drill collar
4145H

1.Introduction

This instructions is designed for technical operation and use of drill collar.The instruction provides references for the technical characteristics of the drill collar.This manual is issued by our company TSC Drill Pipe includes advices for preparation, operation, technical maintenance, scrap standards, transportation and storage operations.

This specification is combined with legal and technical documentation, as well as the user's use of the relevant rules and regulations of the drill collar.

2.Application areas and manufacturer guarantees

The drill collar is mainly used for drilling and servicing of oil wells and natural gas wells.The drill collar is not specified in hydrogen sulfide, carbon dioxide, acid, alkali and salt environment.The manufacturer can guarantee the quality of the materials within 12 months (Transportation and storage should be according to the specification)from the purchase of the drill collar from the buyer.

3. Summary of drill collar

3.1.necessary information for the goods

Execution standard: API Spec7-1 2nd E1E2A1 and API 7-2 2nd E1E2A1A2A3

Size:φ247.65X76.2mm

Material :4145H

Drill collar Size(OD AND ID):φ247.65x76.2mm

Connection:NC70

Joint thread rotation direction:Right hand

Length of:9600±152.4mm

Surface treatment of thread: apply thread grease special for drilling tools,and installed with thread protector .

Quantity:4pcs

3.2drill collar performance

Diameter of pipe body（mm）	Material	Inner diameter of pipe body(mm)	Drill collar size	Connection
247.65	4145H	76.2	247.65*76.2mm	NC70

3.2.1Mechanical properties of pipe body

Yield strength（Mpa）	Tensile strength（Mpa）min	HB	Elongation %	Charpy impact test
≥689	≥931	285-341	≥13	≥54J

4.Usage of drill collar

Be sure to check the specifications of pipe body and the type of joint thread before use.In order to avoid the thread adhesion , it is necessary to clear the threads of female and male and remove impurities.It should be done three times make-and-break for the first time use.For the first time, buckle the 1/2 of the torque on the button, and the second button will be deducted on 2/3 of the torque, and then the third one will be full and then unloaded and then connected to the lower well.**Apply thread grease fully when make-and-break**.Note:The make and up torque for 4145H.

NC70 is 145550N.M

Be sure to check the thread before drill tools connecting . If the thread breaks, it is considered disqualified.

4.1Precautions for use of drill collar

When the new joint thread is used for the first time, the following procedure must be followed.

1.When the new joint thread is first make up and the first to hole, connecting slow, and then it will be tightened up with the lifting pliers, whether it is using the spinning rope or using the buckle, if it is too fast, it will be easy to damage the joint thread.

2.When the internal and external threads are not good, do not force make up. When connecting, the new thread will against each other sometimes.And then you have to reverse it a little bit, and then screw it up again.

3.Adhere to the double clamp break-out.When the internal and external threads are tight, avoid using hammer and other heavy objects to knock the joint, so as to avoid damage to the joint.

4.When drill collar assembling, it is necessary to strictly check the tight distance of the match, and must be put in place with free pliers, and no clearance should be left. Otherwise, in normal drilling, it will cause drill pipe fracture.
5.The threads must be cleaned before each connection is connected.The inner thread and its surface shoulder should be evenly applied with the drill pipe thread grease.It is best to use a round, hard brush.Don't use brown rope.Make sure the thread grease and brush are clean and no impurities.Seal the drum after use thread grease.
6.The external thread end shall not be impacted to the internal thread on the shoulder, otherwise the external thread will be damaged or the internal thread shoulder will be damaged. This kind of damage can be overcome by drillers and drillers, coordination, slow and steady, concentration and light.
7.The internal and external threads must be in middle before connecting . When the joint swaying or has the jamming phenomenon, do not allow the high speed buckle, otherwise will damage the thread. When connecting drill pipe one by one, using the fastener on the drill pipe can easily cause thread damage. At this time, special attention must be paid to ensure that the joint threads are clean, with sufficient thread grease, the joints do not swing, and there is no jamming phenomenon. After the buckle, it is necessary to use the tongs (double pliers) to press the specified torque, otherwise it will increase the possibility of damage to the joint threads.
8.When up and down the drill floor,must use special lifting ring or lifting sub,and with the wire guard cap to prevent damage to the thread.
9.Use a special elevator or safety slip when running the drill collar.

4.2 conditions that drill collar unusable

1.Screw the male joint into the female joint.
2.It is easy to damage the thread when screw drilling string parts break off.
3.Lift or down the drill string while the shock absorber is damaged.
4.Use a slip with a screw plate that does not meet the drill collar size.
5.Clamp the pipe body with a machine wrench.
6.Down the drill pipe to well or take out from well without the safety element.
7.Beyond the torque
8.Lay a gasket on the hard surface of the male and female joint.
9.When rotating, use super lubricants in the bore to reduce the wear of the drill collar.

5.Transportation and storage

1. Do not place heavy objects, acid or alkaline chemicals on the drill tool, do not perform electric or gas welding operations on the drill tool, and do not use the drill tool as an electric welding wire, welding any mark or jaws, etc.;
2. Before well completion and recovery, the inner and outer walls of the pipe must be rinsed with clean water, and must be placed on the pipe rack according to regulations when stored at the well site;
3. In the process of retrieving, loading, unloading and transporting drilling tools, the drilling tools should be equipped with thread protectors, and the operation should be stable to prevent severe collisions.
4. When not in use for a long time, the drilling tools should be maintained in time, and special thread grease for drilling tools should be applied to prevent the residual drilling fluid or other factors from corroding the threads or pipe body.

Additional remarks

1.Check drill collar regularly
1.1 Conduct appearance test for threads before screwing and after each twist
1.2Check the pipe body and joint connection with the appearance test before use.
1.3If any defect is suspected, ultrasonic or magnetic particle inspection should be performed.
1.4The main reason for the failure of the drill collar is the fatigue damage of metal under different loads. All of these to prevent accidents on a regular basis for drill collar inspection. Drilling collar periodic inspection is based on the enterprise standard.
In this case, if the drill string works more than the allowable load range, it is also necessary to eliminate the hidden trouble caused by the defect (jamming of drilling, flying drill).
2.There are strict requirements on the data of the drill collar being converted from one steel-level to another. If the mechanical wear value or the drill collar's own defect exceeds the allowable level 3, the drill collar is deemed to be unqualified.
3.The twist of all joints is recommended in the specified torque, depending on the joint type and size, the friction coefficient of the mating surface and the yield tensile strength of the material.
4.The torque value of the drill pipe is also reduced by reducing the external diameter due to the defect.
5.Operation registration and drill tool cancellation should according to company standard.

QUALITY DOCUMENTATION PACKAGE

Customer: "LTAVA CAPITAL GROUP" LLC LCG CO.LTD

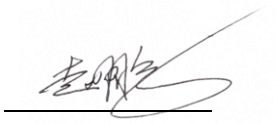
P.O Number: D2026-0126-13

Production: Spiral Drill collar

Quantity: 4 pcs

Specification : 9 3/4"*3" NC70 4145H R2 31.5±0.5ft

Φ247.65*Φ76.2 NC70 4145H R2 9600±152.4mm



QC Manager

2026-01-19

Date