



Insert Bushing CAT IV Inspection Certificate

Client	DAQING DRILLING COMPANY	Location:	DQ-022
Date of Service:	21.12.2024	Certificate No:	QC-DQ-12-24-0249/101
Next Through Examination:	20.06.2025	Specification:	API RP 8B

PROCEDURE

Quantity:	01 Set
Equipment Name:	Casing Insert Bushing Bowl
Size:	13 3/8"
Serial No:	333
Standard:	API RP 7L CAT IV
Frequency:	06 Month

The Rig was equipped with Insert Bushing the Following specification:

PROCEDURE

**Insert bushing found stripped down / disassembled condition for inspection. CAT IV Full inspection.
 Insert bushing Inspection was conducted per API standard.**

Removed both half of the drilling bowls outside of Insert bushing using proper lifting chain sling
 Visually inspected the inner and outer surface areas of the bushing for any burrs and panned-over edges
 Cleaned the inside taper of the insert bushing from any abrasive materials
 Hold a straight edge against the tapered area to measure the taper length as per OEM recommendations
 Measured the taper angle and throat diameter and compared with OEM recommendations
 Performed MPI on the recess and load-bearing areas of the drilling bowls
 After completing the inspection Lubricate the back of the drilling bowls before assembling the insert bushing
 Inserted the drilling bowls inside the Insert bushing using the proper lifting chain sling
 Observed the height of the set slips in the Insert bushing and ensure that it is not riding low in it.
 Prepare and submit the inspection report

**** Visual and MPI were carried Out on the Available Critical Areas of the Insert Bushing and Found Satisfactory for Further Use.**

**** CAT IV Inspection Was Carried Out on Insert Bushing and Found Satisfactory at The Time of Inspection.**

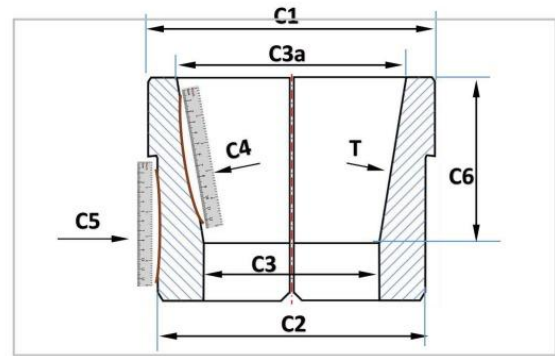
Inspector:	Jaafar Badr	Supervisor:	Ashraf Alsaad
Customer Representative			





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补芯检测项点 Bushing parameters	制造规范 OEM Specification	测量工具 Measuring tool	磨损量推荐 the maximum allowable tolerance
补芯上沿外径 C1 Bushing upper section OD C1	Φ 519.7-520.0mm	卷尺 tape	小于 514mm 报废 Less than 514mm, Reject
补芯下本体外径 C2 Master Bushing lower section OD C2	Φ 481.5-481.8mm	卷尺 tape	小于 475mm 报废 Less than 475mm, Reject
补芯通孔内径 C3 The ID of bushing ID C3	Φ 381.0mm	卷尺 tape	大于 387mm 报废 More than 387mm, Reject
补芯内锥度 T Bushing inner taper T	9° 27' 45" ± 2' 30" $T = (C3a - C3) / C6 = 0.333$	锥度表 taper gauge	小于 9° 或大于 10° 报废 T Less 0.317 or bigger 0.352 Reject
补芯锥面磨损量 C4 The wear on bushing cone C4	-----	钢板尺 steel rulers	大于 1.6mm More than 1.6mm, Reject
补芯下本体外壁磨损量 C5 The wear on outer wall of bushing lower section	-----	钢板尺 steel rulers	大于 1.6mm More than 1.6mm, Reject

Measures	Actual Dim.	The Maximum allowable tolerance	Result
Bushing Upper Section OD C1	520 mm	(Min) 514 mm	ACCEPT
Bushing Lower Section OD C2	479 mm	(Min) 475 mm	ACCEPT
The ID Of Bushing ID C3	382 mm	(Max) 387 mm	ACCEPT
Bushing Inner Taper T	0.32 mm	$T = (C3a - C3) / C6 = 0.333$	ACCEPT
The Wear On Bushing Cone C4	0.25 mm	More Than 1.6 Reject	ACCEPT
The Wear On Outer Wall Of Bushing Lower Section	0.34 mm	More Than 1.6 Reject	ACCEPT

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