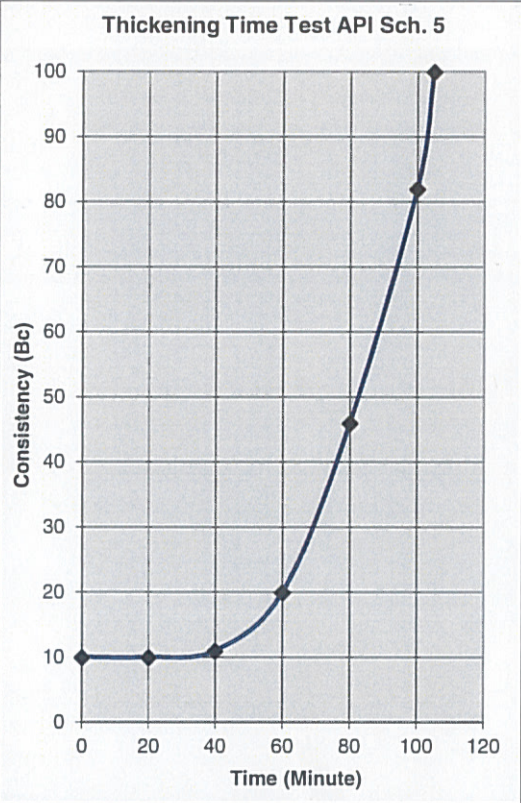




Issue date : 02.05.2019

**TEST CERTIFICATE OF OIL WELL CEMENT CLASS "G" GRADE HSR**  
IN ACCORDANCE WITH API SPEC 10A DECEMBER 2010

CHEMICAL ANALYSIS	SPECS	TEST
MgO (Magnesium Oxide), %	6.00 Max.	1.67
SO <sub>3</sub> (Sulphur Trioxide), %	3.00 Max.	1.29
LOI (Loss On Ignition), %	3.00 Max.	1.11
IR (Insoluble Residue), %	0.75 Max.	0.35
C <sub>3</sub> S (Tricalcium Silicate), %	48 - 65	57.95
C <sub>3</sub> A (Tricalcium Aluminate), %	3.00 Max.	0.23
2C <sub>3</sub> A+C <sub>4</sub> AF (2 x Tricalcium Aluminate + Tetracalcium Aluminoferrite), %	24.0 Max.	16.82
Alkalies (Na <sub>2</sub> O Equivalent), %	0.75 Max.	0.49
PHYSICAL TESTS	SPECS	TEST RESULTS
Soundness (%)	0.80 Max.	0.02
Fineness, Blaine (M <sup>2</sup> /Kg)	---	284
Free Fluid ( Free Water) (%)*	5.90 Max.	4.5
Thickening Time Sch. 5 (Minutes)	90 - 120	103
Max. Consistency 15-30 Min. (Bc)	30.0 Max.	10
8 Hrs. Compressive Strength @ Atmospheric Pressure (PSI)		
At 38°C	300 Min.	820
At 60°C	1500 Min.	1910



Note : Mix Water=349 +/-0.50, Cement=792 +/-0.50

**REMARKS**

Batch No: OWC19-17  
Type: WEEKLY  
Testing End / Desp.Date: 20-25.04.19

ASST. MANAGER Q.C.

MANAGER Q.C.

GENERAL MANAGER(Manuf.)

QC-F-016  
1/1

END OF TEST CERTIFICATE



ISO 9001 and 14001 Management System Certified Company

