

# TYPE APPROVAL CERTIFICATE

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**This is to certify:****That the Electric Motor**with type designation(s)  
**CM628TUT**

Issued to

**National Oilwell Varco - Rig Technologies Division FM 529  
Houston, TX, USA**is found to comply with  
**DNV GL offshore standards****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Houston** on **2018-04-23**This Certificate is valid until **2023-04-22**.DNV GL local station: **Houston**for **DNV GL**Approval Engineer: **Sowkarthika Seetharaman**

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**Christian Nilsen  
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



## Product description

Type CM628TUT AC Induction motor :

Voltage : 600/690  
Rated Frequency : 10-70 Hz – 840/920 RPM @ 42/46 Hz  
Duty Type : S1  
Number of Poles : 6  
Enclosure Class : IP44  
Ambient temperature : 45°C (Temperature rise of 105°C at 45°C Ambient)  
Ex- class : Exe II T3  
Insulation Class : H  
Air Flow : 3200 CFM

## Application/Limitation

The information related to Ex- Certification from recognised test institution is given as for information only. Ex installations to be approved in each case according to the Rules and Ex- Certification/ special condition for safe use listed in valid Ex- Certificate issued by a notified/ recognized certification body.

## Type Approval documentation

### Tests carried out

Temperature rise, Overload, Overspeed, Insulation Resistance, High-pot, Winding resistance test, No load, Vibration per DNVGL-OS-D201, Ch2, Sec 5.

### Marking of product

For traceability of the product to this Type Approval Certificate the products are as a minimum to be marked as follows:

1. Serial number, Manufacturer's name and Type Designation
2. Voltage, frequency, Speed
3. Power Class (kW/kVA)
4. Winding insulation class
5. Degree of protection

## Periodical assessment

The scope of the retention/ renewal survey is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:

1. Inspection of factory samples, selected at random from the production line (where practicable)
2. Results from production Sample tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out.
3. Review of Type Approval Documentation
4. Review of possible changes in design, materials and performance
5. Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Survey to be performed every second year.