



Marine & Offshore
Division

Certificate number: 40451/A1 BV

File number: ACE 4/880/1

Product code: 2593I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

NANNI INDUSTRIES SAS

LA TESTE - FRANCE

for the type of product

GENERATOR SETS

QLS10T / QMS7.5M / QLS12T60 / QLS9M60

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships,
BUREAU VERITAS RULES for the Classification of Naval Ship,
BUREAU VERITAS RULES for the Classification of Yachts,
BUREAU VERITAS RULES for Classification of Ships less than 500 GT
NR 566

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 05 Nov 2020

For BUREAU VERITAS,

At BV BORDEAUX, on 10 Feb 2016,

Frédéric PALLARD



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarp.com/veristarnb/jsp/viewPublicPdfType.jsp?id=jqzagzsjc0>

BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

I. PRODUCT DESCRIPTION:

- Product model or type designation:

QLS10T / QLS7.5M / QLS12T60 / QLS9M60

- Product description:

Marine generator set, diesel engine and 4 poles generator

I.1 - Generator set specification:

Generator set model 50Hz			QLS10T	QLS12T60	QLS7.5M	QLS9M60
Engine model			KUBOTA D1105 BG			
Alternator model			LSAM 40VS1	LSAM 40VS2	LSAM 40VS1 M	LSAM 40VS1 M
Type of wiring			3 Phases + Neutral		1 Phase	
Frequency			50 Hz	60Hz	50Hz	60Hz
Output voltage			400 V	208 V	230 V	120 V
Output power according ISO 8528-1	kW	COP	7.0	8.7	6.9	8.3
		PRP	7.9	9.9	7.8	9.4
Output current according ISO 8528-1	A	COP	10.1	24.2	30.0	69.2
		PRP	11.4	27.5	33.9	78.3
Dry weight			kg	251	258	251
Installation max angle (continuous)			(rad) °	15, all direction		
Over heat shutdown					yes	
Low oil pressure shutdown					yes	
Over speed shutdown					yes	
Low battery charging shutdown					yes	
Emergency shutdown switch					yes	

I.2 - Engine specification:

Engine base model	KUBOTA D1105 BG
Number of cylinder	3
Type	Vertical, water cooled, 4 cycle diesel engine

I.3 - Alternator specification:

Alternator model	LSAM 40VS1 & 40VS2	LSAM 40VS1 MONO
Type	4 poles, brushless, with exciter	4 poles, brushless, with exciter
Winding	3 phases, 12 wires, pitch 2/3, Y connection	1 Phase, 4 wires, pitch 2/3, // or -- connection
Insulation	Class H	
Rating Continuous	Class F 105°C 7,2kW to 400V	
Duty	Class H 125°C 8kW to 400V	
Standards	IEC 60034	
BV class type approval	Yes (not covered by this Certificate)	

2. DOCUMENTS AND DRAWINGS:**Nanni Industries SAS:**

- General arrangement drawing
- Instruction manual Ref.:MU_QLS_QMS_970315384_ENG, dated Apr 16, 2012
- Installation instruction Ref.:970316026-ENG, dated Oct 19, 2012
- QLS10T Application documentation, dated Jan 13, 2015
- D1105 Application documentation, dated May 11, 2015
- Wiring diagram No.12 300 002 Ind.A Ed.1, dated Aug 28, 2012
- Wiring diagram 1 pole No.12 300 015 Ind.A Ed.1, dated Aug 28, 2012

3. TEST REPORTS:**Nanni Industries SAS:**

- Data Sheet for calculation of Crankshafts for I.C. Engines – based on IACS UR M44
- Test report No. BV QLS10T, dated Aug 26, 2015 - witnessed by BV Surveyor
- Test report No. BV QLS12T60, dated Aug 27, 2015 - witnessed by BV Surveyor

4. APPLICATION / LIMITATION:

- 4.1 - BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships, Naval Ship, Yachts & Ships less than 500 GT.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - This Certificate applies to gensets. If required by the Rules, each attached piece of equipment is to be either type-approved
- 4.4 - Other materials and/or components to be used: Leroy Somer Marine Generators, types approved by the Society
- 4.5 - QLS generator set is not intended for emergency use.
- 4.6 - Alternators have to be covered by a valid type approval certificate, issued by the Society

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above product are to be supplied by **NANNI INDUSTRIES SAS** in compliance with the type and the requirements described in this certificate.
- 5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
- 5.3 - BV product certificate is required.

6. MARKING OF PRODUCT:

- 6.1 - Trade name.
- 6.2 - Date of manufacture and serial number.
- 6.3 - Equipment type or model identification under which it was type-tested
- 6.4 - @or \ conformity marking, as relevant (I product only).

7. OTHERS:

- 7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **NANNI INDUSTRIES SAS, France**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.
- 7.2 - This certificate supersedes the Type Approval Certificate No. 40451/A0 BV issued on 05 Nov 2015 by the Society.

*** END OF CERTIFICATE ***