Guide for the procedure to marinise NRE type machinery and equivalent engines like truck engines (EURO VI) and checking the eligibility for installation of these engines into inland navigation vessels



October 2019



European Committee for drawing up Standards in the field of Inland Navigation

Guide for the procedure to marinise NRE type machinery and equivalent engines like truck engines (EURO VI) and checking the eligibility for installation of these engines into inland navigation vessels

Part I Definitions

- "Manufacturer" means any natural or legal person who is responsible to the approval authority for all aspects of the engine EU type-approval or authorisation process and for ensuring conformity of engine production, and who is also responsible for market surveillance concerns for the engines produced, whether or not they are directly involved in all stages of the design and construction of the engine which is the subject of the EU type-approval process.
- 2. "Marinisation" is the modification of an engine for installation in an inland waterway vessel, in a view to fulfil the requirements of the Rhine vessel inspection regulation or the Directive (EU) 2016/1629.
- 3. "Mariniser" means the one who performs the marinisation of an engine.
- 4. "Marinised engine" is an engine that has been marinised for use and operation aboard an inland navigation vessel.
- 5. "Approval Authority" means the authority of a EU Member State established or appointed by a EU Member State and notified by it to the European Commission and which has competence for all aspects of the EU type-approval of an engine type or of an engine family under Regulation (EU) 2016/1628 where a stage V NRE engine is used or according to Regulation (EC) No 595/2009. Where a Euro VI truck engine is used under UNECE Regulation 49-06, the approval authority is a type approval authority designated by a contracting party to the UNECE 1958 Agreement.
- 6. "Technical Service" means an organisation or body designated by an approval authority as a testing laboratory to carry out tests or inspections, on behalf of the approval authority under Regulation (EU) 2016/1628 where a stage V NRE engine is used or according to Regulation (EC) No 595/2009. Where a Euro VI truck engine is used under UNECE Regulation 49-06, the technical service is a technical service designated by a contracting party to the UNECE 1958 Agreement.
- 7. "Inspection body" means an authority authorised to carry out inspections in accordance with the Rhine Vessel Inspection Regulation or Directive (EU) 2016/1629, which are based on the ES-TRIN.
- 8. "Type Approval" is the process defined in Regulation (EU) 2016/1628 or UNECE Regulation 49-06 including generation of the information document containing the parameters that define an engine of the approved type.
- 9. "Type Approval Certificate" is the certificate issued by an approval authority as a result of successful completion of the process defined in (8).
- 10. 'Engine parameter protocol' means the document pursuant to ES-TRIN Appendix 6, in which all the parameters, together with changes, and including components and engine settings which affect the level of emission of gaseous and particulate pollutants from the engine are duly recorded.

- 11. 'Manufacturer's installation instructions' means the document of manufacturer in accordance to Article 43(2) of Regulation (EU) 2016/1628 with all the all relevant information and instructions that are necessary for the correct installation of an engine in non-road mobile machinery, including a description of any special conditions or restrictions linked to the installation or use of the engine.
- 12. 'Engine manufacturer's instructions' means the document in accordance to Article 9.04 of the ES-TRIN for the specification of the components relevant to exhaust gas as well as settings and parameters whose use or compliance can be assumed to be based on the continuous fulfilment of the exhaust emission limits.

Part II Instructions

- 1. The mariniser of the engine draws up documentation containing all the changes to the marinised engine, its exhaust gas aftertreatment system and its emissions control strategy as compared with the type approval information document:
 - a) according to Regulation (EU) 2016/1628 when an original NRE engine is used; or
 - b) according to Regulation (EC) No 595/2009 or UNECE Regulation 49-06 when an original Euro VI truck engine is used.

This documentation must also include all modifications that the installation of the engine requires compared with the original engine manufacturer's installation documentation.

- 2. An approval authority or a technical service reviews these modifications and confirms the status with reference to the following possible outcomes:
 - a) a modification that neither affects the conformity with the type approval nor requires any changes to the engine manufacturer's installation instructions;
 - b) a modification that may be acceptable with an extension or revision of the type approval including any required modification to the manufacturer's installation instructions;
 - c) a modification that does not comply with (a) or (b) (usually a non-conformity relative to the type approval).
- 3. For engines certified according to (1)(b), a recognised technical service under Regulation (EU) 2016/1628 shall, confirm that the marinised engine complies with the requirements of Delegated Regulation (EU) 2017/654 Annex IV, Appendixes 1 or 2.
- 4. The approval authority and technical services referred to in (2) and (3) may be identical institutions if they have been assigned these responsibilities by law.
- 5. If (2(a)) and, where applicable, (3) apply, the marinised engine may be installed in an inland navigation vessel without further action, other than ensuring installation according to the manufacturer's emission-related installation instructions and to ES-TRIN requirements.
- 6. If (2)(b) and, where applicable (3) apply, the mariniser of the engine can request the engine manufacturer
 - a) to obtain the necessary modification of the type approval with the relevant approval authority; and/or
 - b) to make the necessary modification to the manufacturers installation instructions.

Should such a modification be made, including any required amendment of the engine manufacturer's instructions for emissions-related components, and if (3) applies, the provisions of (5) apply mutatis mutandis. Otherwise, (7) shall apply.

- 7. If (2)(c) applies, the marinised engine may only be installed if it has received new type approval in accordance with Regulation (EU) 2016/1628 for NRE, IWA or IWP. Alternatively, a new type approval in accordance with Regulation (EC) No 595/2009 or UNECE Regulation 49-06 is permissible subject to the conformations as per (3).
- 8. In addition to the copy of the type approval certificate, the engine manufacturer's instructions and the engine parameter protocol required by ES-TRIN, Article 9.01(3), the confirmations referred to in (2) and (3), including the address of the approval authority or technical service responsible for the review carried out in point 2 and 3, are submitted to the inspection body and kept on board.
- 9. An engine of a type which has already been found to be fit for use in an inland navigation vessel is permitted to be installed in other inland navigation vessels. The presentation and retention on board of the documents shall follow the procedure in (8).
- 10. The inspection body of a CESNI Member State that has accepted marinised engines informs the CESNI Secretariat accordingly. The CESNI Secretariat updates the register of marinised engines available on the CESNI website.
- 11. If one marinised engine is accepted by one CESNI member in accordance with this procedure, including the publication on CESNI website, then the marinised engine is deemed accepted by other CESNI members.

Part III Explanatory notes

A. Concerning the principles of the guide

- 1. The guide aims to ensure legal certainty concerning the installation of engines and maintenance of the type approval or the granting of a new type approval, as only type approved engines are allowed to be installed onboard.
- Engines that do not need to be marinised prior to installation in inland navigation vessels do not fall under this guide but are required, where applicable, to be certified as per (3) of part II in accordance with Delegated Regulation (EU) 2017/654.
- 3. Measurement on-board to demonstrate compliance with limits: the type approval process also includes conformity of production, verification of the type approval documentation and only the approval authority or a technical service appointed by it can judge the overall impact of the engine modifications (including the documentation) on the type approval.

B. Concerning the content of the guide

- 1. The approval authority will normally carry out the assessment only if the modifications to the engine obviously do not result in any change in the type-approval (i.e. point 2 (a)). Otherwise, it will refer the applicant to the technical service.
- 2. The technical service involved in the approval procedure for the base engine is best placed to judge whether a modification to the engine affects the aforementioned engine's emissions or type approval inasmuch as it is the technical service which has in practice inspected the engine and has confirmed the measured emissions as part of the type approval process. It may involve the Inspection body in the evaluation.

- 3. An amendment of the type-approval (extension, revision or revocation) of an existing type approval can only be initiated by the manufacturer of the original engine who holds that type approval.
- 4. Once an original engine has been brought onto the market, the approval authority or technical service may only provide type approval information with the engine manufacturer's consent.
- 5. Each engine type for which a new or amended type approval is issued shall be subject to all the provisions of Regulation (EU) 2016/1628, Regulation (EC) No 595/2009 or UNECE Regulation 49-06 as relevant. This also includes the requirements as to marking, installation, conformity of production, engine monitoring, documentation updates, in-service conformity (Euro VI) or in-service monitoring (NRE) etc.
- 6. The mariniser has to be aware that he may be held to be the engine's manufacturer under Article 15(2) of Regulation (EU) 2016/1628. This includes all other obligations arising from Regulation (EU) 2016/1628 and Directive (EU) 2016/1629. Therefore, it is recommended to consult the engine's manufacturer and a technical service at an early stage to find out about the consequences of marinisation.

C. Concerning the technical services

The technical services referred to in this guide (2) and (3)

- i. under Regulation (EC) No 595/2009 in in conjunction with Directive 2007/46/EC are published on the following EU website: <u>http://ec.europa.eu/DocsRoom/documents?locale=en&tags=technical-service-</u> <u>auto&sortOrder=asc&pageSize=30&sortCol=title</u>,
- ii. under Regulation (EU) 2016/1628 are published on the following EU website: <u>http://ec.europa.eu/DocsRoom/documents?locale=en&tags=technical-service-nrmm-emissions&sortOrder=asc&pageSize=30&sortCol=title</u>

D. Concerning the technical aspects of marinisation

The following components, among others, could be affected by marinisation (list is not exhaustive):

- cooling components,
- components of the fuel system,
- control components,
- components for the monitoring function,
- component of the exhaust gas aftertreatment system,
- ...

- 5 -
