
M80 Requirements for AC Generating sets

(May 2019)

M80.1 General

1. This UR provides requirements for AC Generating sets (i.e. Reciprocating Internal Combustion engines^{a), b)}, alternators^{c)} and couplings) in addition to those stated in UR E13, UR M3, UR M51, and UR M53.
 - a) Reciprocating Internal Combustion engines are to comply with the requirements in UR M51 and M53.
 - b) The Reciprocating Internal Combustion engine speed governor and overspeed protective device are to comply with the requirements of UR M3.
 - c) Alternators are to comply with the requirements in UR E13
2. The requirements are applicable to AC generating sets driven by reciprocating internal combustion engines irrespective of their types (i.e. diesel engine, dual fuel engine, gas-fuel engine), except for those sets consisting of a propulsion engine which also drives power take off (PTO) generator(s).

M80.2 Generating sets - requirements

1. The generating set shall show torsional vibration levels which are compatible with the allowable limits for the alternator, shafts, coupling and damper.
2. The coupling selection for the generating set shall take into account the stresses and torques imposed on it by the torsional vibration of the system. The torsional vibration calculations are to be submitted to the Classification Society for approval when the engine power is 110 kW or above.
3. The rated power shall be appropriate for the actual use of the generator set.

Note:

1. This UR is to be uniformly implemented by IACS Societies for AC generating sets:
 - i) when an application for certification of the generating set is dated on or after 1 July 2020; or
 - ii) which are installed in new ships contracted for construction on or after 1 July 2020.
2. The “contracted for construction” date means the date on which the contract to build the vessel is signed between the prospective owner and shipbuilder. For further details regarding the date of “contract for construction”, refer to IACS Procedural Requirement (PR) No. 29.
3. The “date of application for certification of the generating set” is the date of whatever document the Classification Society requires/accepts as an application or request for certification of an individual generating set.

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4. The entity responsible of assembling the generating set shall install a rating plate marked with at least the following information:
- (i) the generating set manufacturer's name or mark;
 - (ii) the set serial number;
 - (iii) the set date of manufacture (month/year);
 - (iv) the rated power (both in kW and KVA) with one of the prefixes COP, PRP (or, only for emergency Generating sets, LTP) as defined in ISO 8528-1:2018;
 - (v) the rated power factor;
 - (vi) the set rated frequency (Hz);
 - (vii) the set rated voltage (V);
 - (viii) the set rated current (A);
 - (ix) the mass (kg).

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