framatome

Small Diesel

Small Diesel Solutions for Power Output up to 2200 kW

The basic design of the qualified small diesel with many applications can be easily implemented in nearly all kind of plants

Challenge

For Emergency Diesel Generator (EDG) gensets in the power range below 2200 kW not many engines are available for nuclear application. Most engines are based on common rail technology with software-based electronics and series manufacturing, which leads to qualification issues and accordingly low interest by most manufacturers for nuclear application or corresponding high costs.

As a result, operators and designers in existing or new plants face major obstacles for replacements or new deliveries of diesel generator sets in this lower power range with a nuclear safety classification ("1E").

Genset assembly in supplier facility

Solution

Framatome has now developed, with its partners KOHLER®-SDMO® as genset supplier and Krampitz as tank manufacturer a nuclear qualified, software-free solution as stand-alone generating sets or completely functional container package.

This solution has a large number of applications over the last decade for industrial and nuclear projects.

The same qualified type is able to provide a wide range of power output, up to 2200 kW, and accordingly enables flexibility for the specific customer needs.

Framatome Small Diesel model kit provides an alternative for Form-Fit-Function-Replacements for plant operators, which saves investment costs and secures the future of item's long-term availability, maintenance, spare parts, and operational conditions.

Customer benefits

- Easy integration into existing plant design
- Modular concept
- Spare parts management and easy replacement of obsolete devices
- Software-free nuclear qualified solution
- One genset type available for several power outputs
- Standardized components for short delivery times within projects

Technical information

Possible configuration genset

- Performance Class: ISO8528-5, G3
- Generator type: S1 in accordance IEC 60034-11
- Nominal output: up to 2200 kW
- Rated voltage: 400 V (Other LV/MV on request)
- Frequency: 50 Hz/60 Hz
- Speed: 1500 rpm/1800 rpm
- Power factor: 0.8 (lagging)
- Overload capacity: 1.1 rated power for 1 hour
- Current overload capacity: 1.5 rated current for 15 s
- Overspeed capability: 120 % for 2 min
- Start-up time: down to 10 s
- Type of soundproofing: ISO 20/40
- Integrated lube oil supply system for operation until 72 h without re-filling and re-filling in operation

Your performance is **our** everyday **commitment**

Container solution

Storage tank

Technical information

Possible configuration storage tank

- 6/20/45/55 m³ Volume with ISO support frame; DIBt Nat. Tech. Approval (EOTA/UEAtc/WFTAO)
- Seismic rigid
- Advanced fuel treatment
- Double wall safe
- Vacuum leak detection
- Double transfer pumps
- Direct re-filling station
- Overflow safe
- Fire-retardant Insulation
- Anti-corrosion coating
- Space heating
- Level measurement
- Access ladder and manhole

Key figures

Up to **40 applications** in nuclear projects

Up to **2.2 MW** power output

Stand-alone genset or container solution

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