

Multi Group Diesel

Several small diesel generators replace one large diesel set

Multi group diesel increase the reliability and improve plant safety

Challenge

Large diesel generator sets are highly complex and require high efforts for integration engineering and erection.

Replacement of obsolete large diesel generator sets with other brands is highly difficult due to different footprints.

If one large diesel generator set is damaged, repairs are time consuming and extended outages are required.

Solution

Transfer of a common and proven industry solution to nuclear.

Multiple sets in N+1 or N+2 safety concepts improve reliability and allow easier maintenance compared to one large diesel.

Replacement of a large diesel with multiple small sets is easier than by another large diesel.

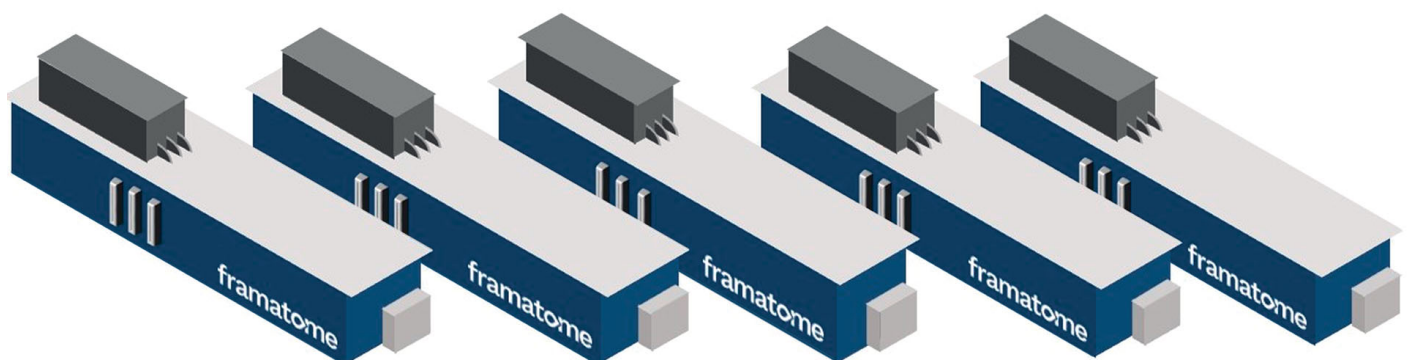
Multi group diesel sets allow for innovative concepts (e.g. sound attenuation, container solutions and mobility).

Use of central or de-central auxiliary systems (fuel supply, starting energy, cooling water and/or cooling air, controls).

Flexible set-ups in frame of load steps and maintenance- and outages times.

Customer benefits

- Size of train can be adjusted by amount of Diesel Generators (DG) used
- Use of standardized DGs possible (engine, generator, electrical systems, switchgear)
- Customization achieved via adaption of superimposed functions
- Higher reliability of each train
- Maintenance of a single DG does not affect availability of train
- Simpler auxiliary systems
- Smaller volume of diesel building



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

Single Large Diesel Generator



Safety concept: N=1 per each safety train

Emergency Consumers

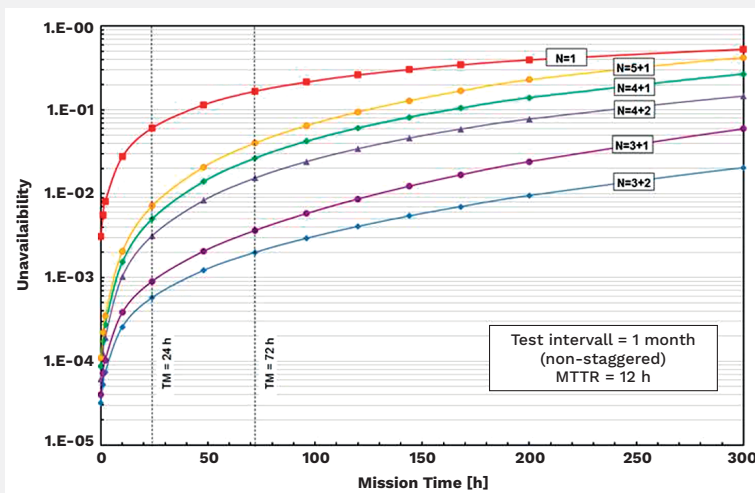
Replacement by Multi Group Diesel Set



Safety concept: N, N+1, N+2 within each safety train

Emergency Consumers

Example of Unavailability vs Mission Time for different safety concepts:



- If a small diesel generator fails, the meantime to repair of most common issues ≤ 12 h
- Significant safety margin over extended mission times when compared to N=1!

Contact: edg@framatome.com
www.framatome.com

It is prohibited to reproduce the present publication in its entirety or partially in whatever form without prior written consent. Legal action may be taken against any infringer and/or any person breaching the aforementioned prohibitions.

Subject to change without notice, errors excepted. Illustrations may differ from the original. The statements and information contained in this publication are for advertising purposes only and do not constitute an offer of contract. They shall neither be construed as a guarantee of quality or durability, nor as warranties of merchantability or fitness for a particular purpose. All statements, even those pertaining to future events, are based on information available to us at the date of publication. Only the terms of individual contracts shall be authoritative for type, scope and characteristics of our products and services.

framatome