



THE POWER PEOPLE

PROJECT OVERVIEW

Waste not, Want not

DRUPS Conversion Project regenerates existing Emergency Power System

DEEP IN THE HEART OF A LONDON DATACENTRE, AVK'S SPECIAL PROJECTS TEAM ARE UP-CYCLING ON AN EPIC SCALE.

The team are currently converting 6 x 11kV DRUPS machines into standby generators at a high-profile London data centre, where downtime is simply not an option.

To maintain resilience for the client, the work is being carried out in two phases. Phase 1 saw 6 units taken offline and converted, and subsequently commissioned with a new control system and new generator switchboard.

The project required the existing DRUPS bedframe to be retained and modified to accept the new Nidec alternator. An extensive torsional vibration analysis was carried out to confirm the characteristics of the flexible coupling, and Anti Vibration Mounts (AVMs) fitted to ensure the overall vibration of the generator set are within the ISO8258 Part 9 guidelines.



DRUPS in situ prior to AVK works



DRUPS core removed

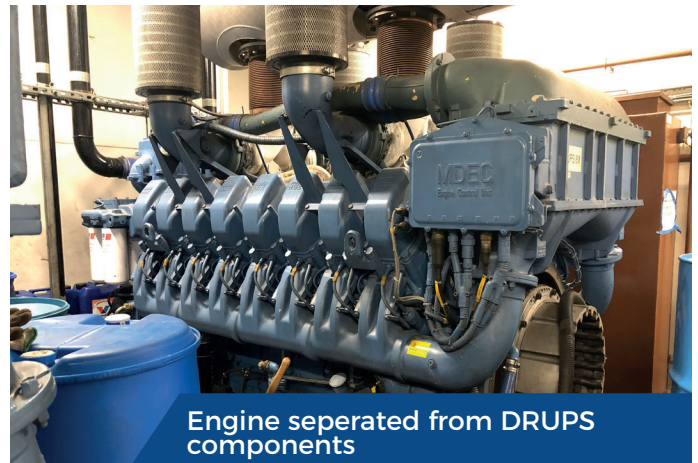
sales@avk-seg.co.uk

Maidenhead: 01628 503900 London: 020 3856 721
Huddersfield: 01484 860238 Dublin: +353 1 431 9847

AVK
THE POWER PEOPLE

A new Schneider Genie-Evo switchboard was installed for generator synchronising and load-feed, and our new control system took control of existing switchgear to utilise what was originally a direct-bypass feed as the mains incomer, and the DRUPS incomer as the generator incomer, to form a mains-synchronising ATS.

We will also control the chiller LV ATS's in order to manage the load-shedding strategy in Phase 2. Phase 1 is now complete, and the building chiller load will be transferred onto the new system to allow phase 2 to be carried out with a further 5 machines.



Engine separated from DRUPS components



New alternators prior to coupling installation



New alternators prior to coupling installation

WHY CONVERT DRUPS TO GENERATOR SETS?

Diesel (or Dynamic) Rotary Uninterruptible Power Supply devices were designed to combine the benefits of a static UPS with a diesel generator.

A DRUPS system can operate within a smaller footprint and without the need for constant air-conditioning associated with a static UPS. However many clients find the more frequent and expensive maintenance regimes required to support DRUPS are a disadvantage.

Often a building's use will change, or the client will alter the infrastructure extensively so that the load supported by a DRUPS can more effectively handle a break in supply in the event of an outage e.g the splitting of IT and mechanical loads.

In instances such as this, a number of our clients are now considering converting DRUPS machines into generators.

To discuss your DRUPS Conversion project with one of our specialist engineering team, please contact John Beesley on 07900 901304 / 01484 860238 or email to john.beesley@avk-seg.co.uk

BENEFITS OF CONVERTING EXISTING DRUPS SYSTEMS INTO GENERATORS:



ENVIRONMENTAL:

As the majority of the DRUPS componentry remains on site and is repurposed, less equipment needs to be physically re-manufactured and replaced. The engines are also compatible to run on HVO fuels.



COST:

Retaining the existing generator engine offers a considerable saving compared to buying new, complete generator sets.



MINIMAL DISRUPTION:

On the assumption that a sound plant replacement strategy exists, there are also considerable savings to be made from not requiring crane lifts and specialist plant-moving contractors. Additionally, there are no outwardly visible signs that the work is taking place inside the building (no cranes or plant-decks).



SPEED OF DEPLOYMENT:

A new 11kV alternator will typically be available in approximately 16 weeks (less for LV), whereas a new 11kV generating set is typically 26 weeks. Much of the enabling works can be completed during the alternator build time, meaning a conversion can be completed well within the typical build period of a new Genset.



Completed Gensets