GENERATOR SET TRANSIENTS

LOADS TRANSIENTS

When a generator set is subject to load change the voltage and frequency will fall if load is applied and rise if load is removed.

The engine design and governor characteristics will determine the extent of the frequency change and its recovery.

The alternator winding configuration, excitation system and automatic voltage regulator will determine the extent of the voltage change and its recovery.

VOLTAGE TRANSIENTS

BS4999 specifies the voltage regulation requirements for alternators.

Various voltage regulation grades are defined in BS4999 which defines the voltage control under steady state and transient conditions.

A minimum voltage grade of VR2.31 should be specified.

FREQUENCY TRANSIENTS

BS5514 (ISO3046) specifies the speed governing parameters for diesel engines.

Various governing accuracy requirements are defined for steady state transient conditions.

A minimum accuracy class A1 should be specified.