

Liquid fuel test instruction for YAMAMA GT6 - GT9

We reserve all rights in this document and in the information contained therein. Reproduction, use or disclosure to third Parties without express authority is strictly forbidden.
© Siemens Industrial Turbomachinery AB

Contents

1	General	3
2	Instructions	4
2.1	Examination of fuel entering the combustor	
2.2	Sampling instructions of fuel entering the combustor	

1 General

The liquid fuel entering the Gas Turbine must always fulfil the fuel specification J242002E/1CS26588 (see *Operation Instruction/Requirements*). A fuel not meeting this specification may cause corrosion and/or damage to the Gas Turbine and its systems. All reasonable means must be carried out to avoid contamination.

Fuel storage, - handling and - monitoring must be done in accordance to the recommendations given in the documents K 8436-1 and K 8436-2 (see *Operation Instruction/Requirements*).

2 Instructions

2.1 Examination of fuel entering the combustor

The tests done on the fuels as well as the sampling frequency should be chosen in regard to the fuel type used (distillate, heavy fuel oil, crude oil etc.) and the risk factors of the fuel, i.e. properties that are likely to fall outside the fuel specification.

At least the following tests should be done to insure that correct fuel enters the combustor:

- Viscosity
- Water content
- Sediment content
- Ash content
- Ash sticking point temperature
- The following elements:
 - Sodium (Na)
 - Potassium (K)
 - Calcium (Ca)
 - Vanadium (V)
 - Lead (Pb)
 - Zinc (Zn)
 - Nickel (Ni)
 - Magnesium (Mg)

Caution! It is not allowed, not even for a short period of time, to operate the Gas Turbine with fuel oil not meeting the requirement of an ash sticking point temperature of min. 950 °C. Sticking ash will rapidly destroy the turbine blading.

2.2 Sampling instructions of fuel entering the combustor

SAMPLING PROCEDURE

- Use appropriate sampling bottle.
- Use appropriate sampling hose with KTM-connector.
- Use a suitable bucket to collect fuel oil overflow.
- Take the sample from test point MBN10AA405 at the shut-off valve.

1. Connect the sampling hose to the test point.
2. Open the needle valve slowly and pour out 1 á 2 litres in order to flush the test hose.

Note! **The fuel oil pressure is 90 bar(g)**

3. Open the sampling bottle and fill it to 75% without changing or moving the needle valve, avoiding loosening of particles.
4. Close the bottle and shake it. Pour out the oil.
5. Flush the sampling bottle at least once more.
6. Fill the bottle to 90 - 95% and close it.
7. Close the needle valve and disconnect the sampling hose.
8. Label the bottle with following informations:
 - Name of plant and B-number
 - Test points location in fuel system
 - Date of sampling
 - Fuel product name and supplier
Note if sample has been taken in connection with fuel delivery
 - Name and organisation identity of sample taker.

REVISION

Rev. ind.	Page (P) Chapt. (C)	Description	Date Dept. / Init.