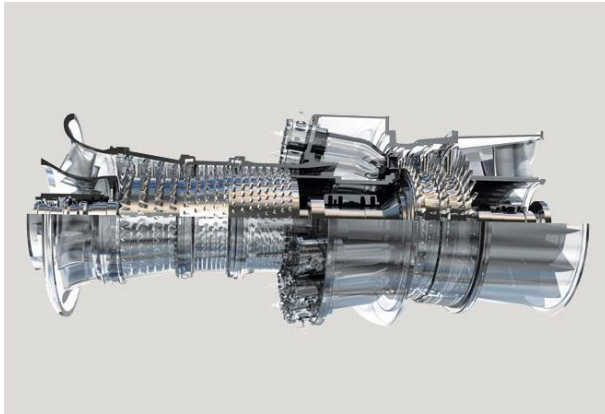
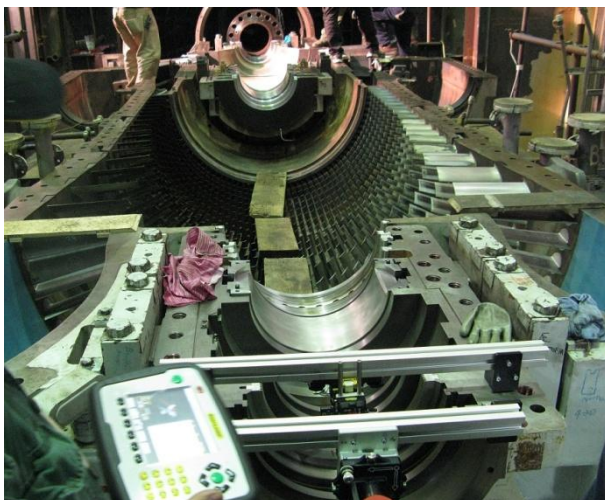




TURBINE & SHAFT ALIGNMENT TRAINING & SUPERVISING - PPC KERATEA/LAVRIO



GT-42 Gas Turbine (model)



E 960B system on the turbine



During training

In General

Purpose

The purpose of the project was the alignment of turbine cells and bearings. Additionally, in cooperation with Easy Laser experts we offered on the job training to PPC personnel on Easy Laser technology in order to be able to use the equipment in a variety of applications.

Field Work

20 days / 2 staff members

Utilised Easy Laser Instrumentation

- Easy Laser Turbine Alignment E 960B
- Easy Laser Machine Tool E 940
- Easy Laser Shaft Alignment E 710

Deliverables

- Reports
- Training Certifications

Difficulties

- The daily working schedule of the power plant
- Working inside a Gas-Turbine with little access and obstacles slowed down the processes

Training series

The first task was to offer training to PPC personnel on Turbine Alignment System E 960B by **Easy Laser**. For this reason **Metrica S.A.** offered training via Easy Laser Application Engineer and Instructor on Turbine Alignment Mr. Prosper Chekroun. The training lasted 5 working days. The team of engineers that attended the training is now a team of certified Easy Laser operators that can successfully complete any kind of measurement in their field.



Measurement series

The reason for this application was extended wear on turbine shaft and bearings.

Gas-Turbine alignment

The main task was to define the geometric condition of the Gas-Turbine, make the necessary adjustment to achieve alignment and then re-measure to document and verify that the alignment was successful and within manufacturer tolerances. All processes were achieved successfully. The equipment used was Easy Laser E 960B Turbine Alignment System.

Movement monitoring

While PPC personnel were performing the movement of the turbine cells, Metrica S.A. utilizing Easy Laser E 940 Machine Tool monitor the movements in order to be successful. This took place by the application Live Values that offers live the results of the movements performed. This application proved a very powerful tool in order to let the personnel know when to stop moving the cells.

Shaft Alignment

After the successful completion of Gas-Turbine cells alignment the shaft of the turbine should be aligned with the generator shaft. For this reason **Metrica S.A.** utilized Easy Laser E 710 in order to perform the alignment. The system can accept thermal compensation values as also as many generator foot pair as needed. The application offers live monitoring of the movements performed while adjusting the movable engine. The process was successful and was also performed on another pair (engine-pump) on PPC premises.



During measurements (Turbine cells alignment)



Live monitoring of cell movements



Turbine-Generator Shaft Alignment

