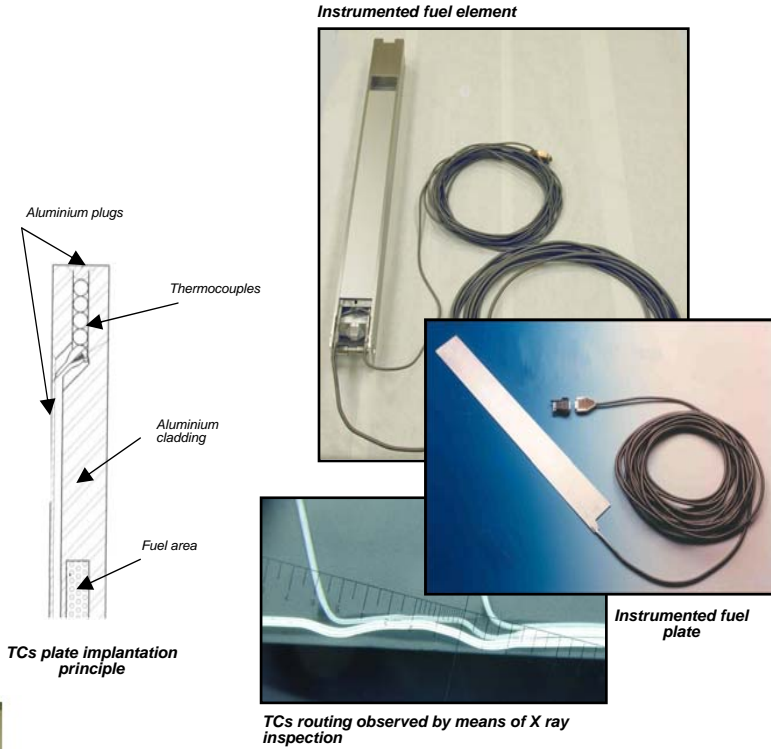
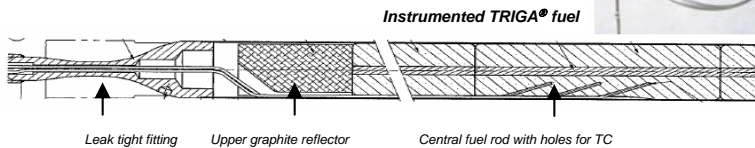


CERCA's FUEL ELEMENTS INSTRUMENTATION MANUFACTURING

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CERCA Z.I. Les Berauds 26104 ROMANS (FRANCE)

- ▶ **Prior MTRs operation, neutronic and thermo hydraulic analysis are performed for checking :**
 - ◆ **The standard reactor operating condition**
 - ◆ **The safety reactor operational limits**
 - ◆ **And for providing numerous and useful data which could be requested either by the regulatory body or by the reactor/customer itself for determining the range of an experiment.**
- ▶ **Instrumented tools are the unique solution for recording representative thermal measurements in order to guarantee the calculation stated above. Thermal instrumentation is carried-out :**
 - ◆ **For validating the thermal codes in the range of the safety reactor operational limits as well as during transient operating conditions**
 - ◆ **For validating and for understanding the temperature behavior of a new product in a frame of its qualification program**



- ▶ **In cross collaboration with our costumers, CERCA has developed for many years a high competency in the field of thermocouples implants.**
 - ◆ **TRIGA[®] fuel element with TCs implanted in the fuel rods**
 - ◆ **Fuel Plates with TCs routed in its 0,4 mm thin cladding**
 - ◆ **Targets with TCs implanted in a cylinder shape close to the fuel surface**
- ▶ **With time and various instrumented product already manufactured CERCA masters the "technological art of instrumentation".**