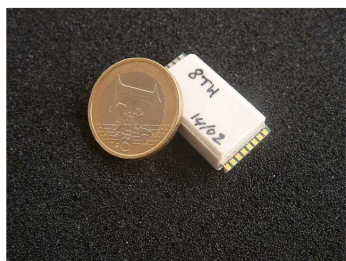


Strain, pressure and temperature measurements

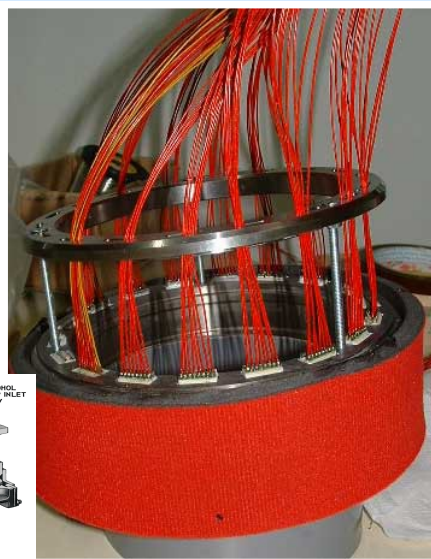
On turbo PUMP

Survived Installation in turbo-pump exhaust cone, (ultra hostile environment)

- Cryogenic to 600°C in < 2 Sec
- Angular Acceleration 0 to 14,000 rpm in < 2 Sec
- Off the scale acoustic noise



**8 Channels miniature module**



**80 Channels TELEMETRY**

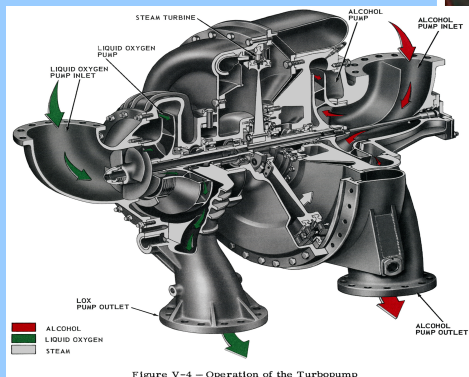


Figure V-4 - Operation of the Turbopump



**ATEH** telemetry support **128 synchronous** temperature and strain gage inputs. HF data stream transmission ease the integration of **ATEH** telemetry on turbine High pressure stage, for example aerospace high pressure turbine or gaz turbine. Overall dimension, weight and architecture allow direct integration of **ATEH** telemetry on hollow shaft.

**Electric specifications:**

- static and dynamic strain : 120 to 1200 Ohm gage
- Embedded open and short circuit gage test (true integrated sinus generator)
- Maximum phase shift between channels : less than 3°
- Temperature measurement : Thermocouple type K-N-J, 1200°C max
- Bande pass :

- 10Hz – 150khz per channel (dynamic gage)
- 0Hz - 20kHz per channel (static gage)

Options :

**Specific high band pass design on demand.**

**Radio HF specification:**

- PCM data transmission
- Frequency range : 900MHz
- Rate : 240Mb/s
- Remote control : On/Off, gain, bande pass and gage current adjustment on the fly.
- High temperature inductive power coil/antenna systems ( +200°C )

**Technical specifications**

- Supply : Induction
- Opérating temperature : -10°C/+125°C
- Acceleration : 40000 G (options 100 000 G)

**Receiver :**

- Analog output emphasis (sinx/x)
- Analog output +/-5V or 0/10V
- PCM Digital output