Plastic Encapsulation of Electronics

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Plastic Encapsulation of Electronics

Present standard design:

- Electronics enclosed in high-pressure resistent, stainless vessel (titanium)
- **Disadvantages:** isolate n metal/metal penetrators against $\geq 250\,\text{bar}$; expensive material (titanium)

Objectives:

Make design less expensive and safer

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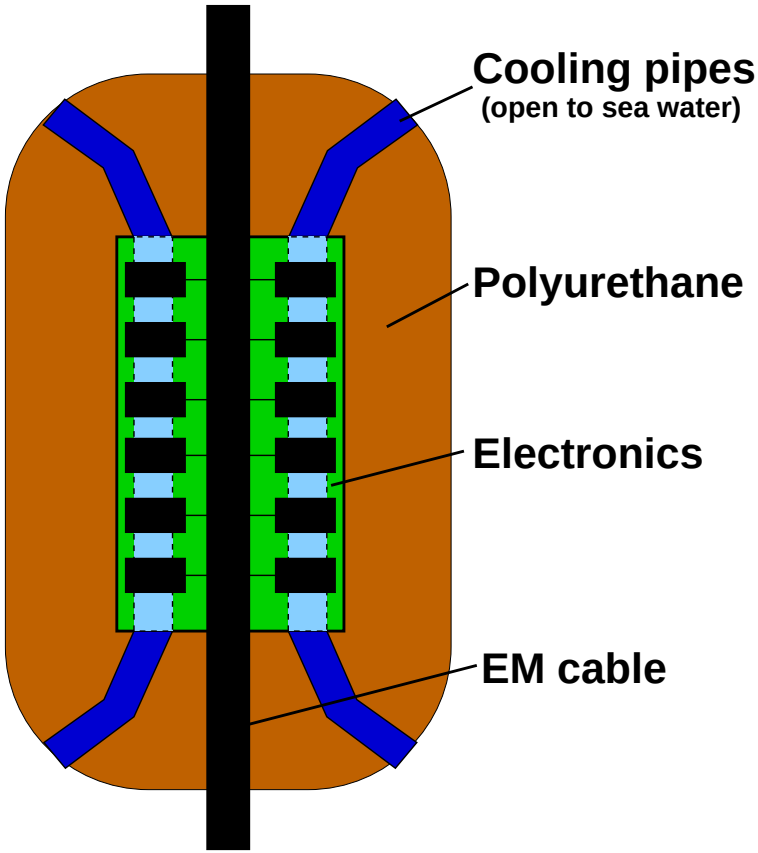
Possible alternative to titanium:

- Cast electronics into plastic (polyurethane)
- If cooling is a problem,
  incorporate cooling pipes
- Electronics pressure resistent?
  If not put electronics in pressure vessel
  (need not be stainless)
- Standard method for hydrophones
  with integrated preamplifier
  (250 bar without pressure vessel
  obviously no problem)

$\Rightarrow$ PU cheaper than titanium &
water tightness seems easier to obtain



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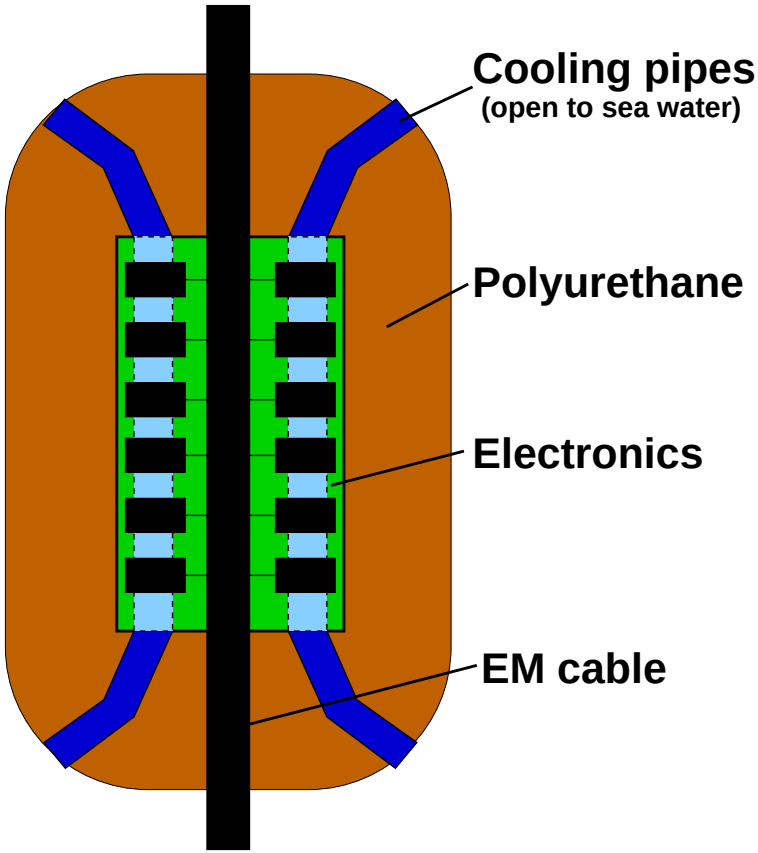

Any Show Stoppers?