

Question 4)

a) A Scuba Diver's air cylinder need to have a material that has the following properties:

Corrosive resistance

wear resistance

~~res~~ high hardness

~~ductile~~

density

I have chosen these properties as I believe the tank needs to resist rust and wear, needs to be strong enough to withstand some pressure and it needs to be incredibly dense so it doesn't drag the diver down to the sea bed.

b) 6062 T6 Aluminium is a material that has a high ~~tensile~~ Yield strength of 241 MPa but it is also dense weighing at 2.7 g/cm^3 , I think this is a good contender as it is strong and light

Steel Alloy 1020 is one of the ~~the~~ dense material on the list with a weight of 7.9 g/cm^3 and a Yield strength of 210 MPa. I think this will be too dense for a scuba diver.