

## FIELD ENGINEER FILTER QUESTIONS 2016-2017

---

### QUESTION 1:

You are hydraulically stretching a normal steel bolt that is 8 feet long and 1 inch in diameter. You are required to stretch the bolt by 0.1%. The hydraulic cylinder that you are using to stretch the bolt has an effective cylinder area of 4 square inches. The pressure gauge you are using is accurate to a normal distribution with a standard deviation of 2% of the target reading.

What pressure do you need to set your pump/gauge to in order to ensure 99% of the bolts you stretch reach the minimum required elongation?

### QUESTION 2:

Assume that climate change presents a clear and present danger to mankind as we know it. Provide an original and out-of-the-box solution to reverse global warming. Give sufficient justification/calculations to show that while your idea may be crazy... it just might work.