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ACMA 4000

Question 4 continued.

work out Circumference $C = \pi d$

$$\begin{aligned} &= \pi \times 100 \times 10^{-6} \\ &= 314.2 \times 10^{-6} \end{aligned}$$

length of cylinder is 600mm
width of material is 314.2mm.
width of material is 16.6mm

$$\begin{aligned} \text{Area} &= l \times w \times d \\ &= (600 \times 10^{-6}) \times (314.2 \times 10^{-6}) \times (16.6 \times 10^{-6}) \\ &= 0.188 \text{ m}^3 \end{aligned}$$

Aluminium is 2.7 g/cm^3

so,

$$\begin{aligned} &= (2.7 \times 10^3) \times (0.188 \times 10^3) \\ &= 5.076 \text{ kg.} \end{aligned}$$

Plus 2 caps at 1kg each = 7.076 kg