PAG. 129 N 43

$m = 200\ kg$

$V = 1500\ m^3$
LIV. MARE

$d_{ARIA\ CALDA} = 0{,}3\ \frac{kg}{m^3}$

$d_{ARIA\ FREDDA} = 1{,}29\ \frac{kg}{m^3}$

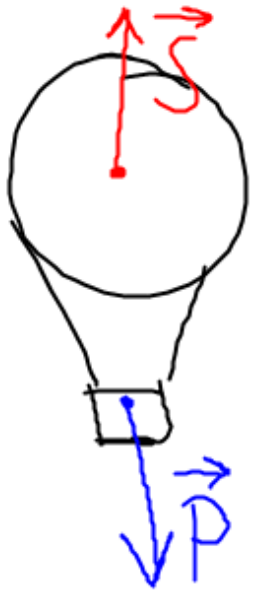
ARIA FREDDA

$S = d V g =$

$= \left(1{,}29\ \frac{kg}{m^3}\right)\left(1500\ m^3\right)\left(9{,}8\ \frac{N}{kg}\right) =$

$= 18963\ N$

SPINTA DI ARCHIMEDE (DIRETTA VERSO L'ALTO)



$P = P_{MONG.} + P_{ARIA} =$

$= (200\ kg)\left(9{,}8\ \frac{N}{kg}\right) +$

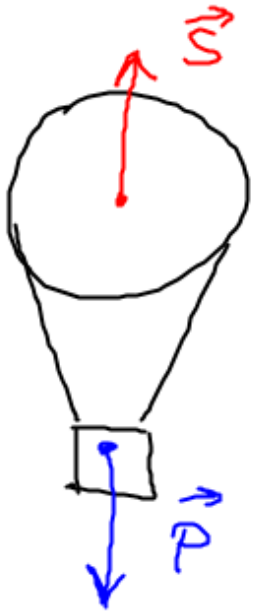
$+ \left(0{,}3\ \frac{kg}{m^3}\right)(1500\ kg)\left(9{,}8\ \frac{N}{kg}\right) =$

$= 6370\ N$

$P_{ZAVORRA} = 18963\ N - 6370\ N$

$= 12593\ N$

$m_{ZAVORRA} = \frac{12593\ N}{9{,}8\ N/kg} = 1285\ kg$



$S = P$

$d_{\text{ARIA FREDDA}} V g = m g + d_{\text{ARIA DENTRO}} V g$

INCOGNITA

$d_{\text{A. DENTRO}} V = d_{\text{ARIA FREDDA}} V - m \rightsquigarrow d = d_{\text{ARIA FREDDA}} - \frac{m}{V} =$

$= 1{,}29 \frac{kg}{m^3} - \frac{200\,kg}{1500\,m^3} =$

$= 1{,}16 \frac{kg}{m^3}$

$S > P$

$d_F V > m + dV$

$dV < d_F V - m$

$d < d_F - \frac{m}{V}$

$d < 1{,}16 \frac{kg}{m^3}$

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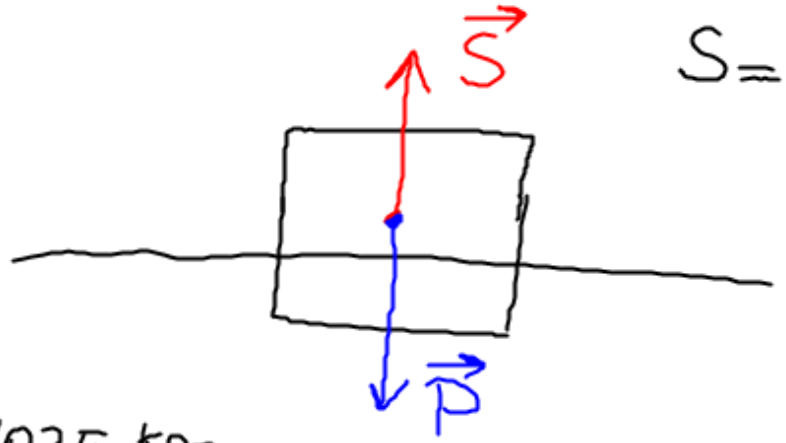

$S = d_{H_2O\ MARE} \frac{V}{3} g$

$d_{H_2O\ MARE} = 1025 \frac{kg}{m^3}$

$P = d_{MATERIALE} V g$

V = VOLUME INTERO

$d_{MAT.} V g = d_{H_2O} \frac{V}{3} g$

$d_{MAT.} = \frac{1}{3} d_{H_2O} =$

$= \frac{1}{3} 1025 \frac{kg}{m^3} =$

$= 342 \frac{kg}{m^3}$