

cost analysis

Aircell T-100  $\$4.59/\text{ft}^2$   
 1"  $\rightarrow \$577.47$

3/4"  $\rightarrow \$577.47$

Total:  $\$1154.96$

Divingcell H-35: Non-perforated  
 $\$245.39 \rightarrow 4' \times 8'$  sheet  $\rightarrow 3.932$  sheets for 2 HT  
 1"  $\rightarrow \$964.79$

3/4"  $\rightarrow \$964.79$

Perforated H-35  
 $(\$104.99)(3.932)(2)$   
 $\$825.6417 \rightarrow \$329.32$  decrease

Total:  $\$1929.57 \rightarrow \$774.61$  increase

Galcoat:  $\$78.98/\text{gallon} \rightarrow 9$  lbs. per gallon

Hardtop takes 16.364 lbs galcoat

$\$143.61$  per side of mold

Total:  $\$287.21$

LOE CSM:

Divingcell core switch  
 187.461 lbs  
 Resin weight 75.4875 lbs  
 Cost  $\rightarrow$

42.7% weight reduction from core alone

WEIGHT ANALYSIS FIBERGLASS

E-BXM 1208:

$A = 125.8125 \text{ ft}^2$

$1\text{b}/\text{ft}^2 = 0.324$

$\rightarrow 2$  sheets  $\therefore$

$= (0.324 \frac{\text{lb}}{\text{ft}^2})(125.8125 \text{ ft}^2)(2 \text{ sheets})$

Total weight = 81.5265 lbs

S-2 Glass:

$2.1 - 9 \text{ oz}/\text{yd}^2 \rightarrow 0.05625 + 0.029576$  (resin absorption)

Resin content 52.58% vol  $\therefore$  resin absorption  
 $(0.05625)(0.5258) = 0.02957625 \text{ lb}/\text{ft}^2$

$\rightarrow = (0.08582625)(2)(125.8125)$

Total weight = 21.596 lbs

Weight reduction =  $(81.5265 \text{ lbs}) - (21.596 \text{ lbs})$

Weight reduction = 59.93 lbs

18.3% reduction in weight from fiberglass alone

199.52 lbs reduction

327.1125 lbs  $\rightarrow$  127.5305 lbs  
 61.01% reduction in weight

Total weight reduction

187.461 - 59.93 lbs

$\rightarrow = 127.5305 \text{ lbs}$   
 WEIGHT NEW HT

Area 125.8125 ft<sup>2</sup>

Current weight 327.1125 lbs

CORE

CORE

Total cost

Current HT

Resin  $\rightarrow \frac{75.4875 \text{ lbs}}{9.2 \frac{\text{lb}}{\text{gal}}} = (8.205 \text{ gallons})(\$54.99/\text{gal})$

Resin  $\$451.20$

Gelcoat

$(\$1079.47)(2)$   
 $\$2158.9425$

1208

$\$221.43$

CSM

$\$289.37$

Aircell T-100

$\$1154.96$

Total  $\rightarrow \$4275.90$

current cost

Fiberglass & Core Change

1208  $\rightarrow$  (S-2)

$\$1.56/\text{ft}^2$

S-2

$(\$196.2675)(2)$

$\$392.535$

3.84767172  
 3.8% cost INCREASE  
 IF only switching fiberglass

Divinycell

$\$825.64$

cost of hardtop mat.

$\$417.69$

$\$158.21$  SAVED

if only switching core  
 7.70% cost DECREASE

Total cost DECREASE = 3.7%