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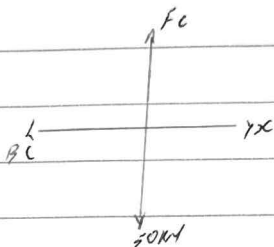
Date.

No.

Matic: 17/ENG03/002

Course: CIV-306

At joint C =



from previous calculated example

$$BC = 50 \text{ kN}$$

$$\therefore -BC + DC = 0 \quad \text{Resolving to horizontally}$$

$$-50 + DC = 0$$

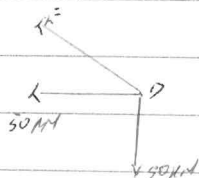
$$DC = 50 \text{ kN (compression)}$$

Resolving to vertical

$$-y - 50 \text{ kN} + FC = 0$$

$$FC = 50 \text{ kN (tension)}$$

At joint D



$$\text{Resolving to horizontal} = -50 \text{ kN} - DC \cos 45^\circ = 0$$

$$50 \text{ kN} = -DC \cos 45^\circ$$

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$$D_k = 50 = -70.7$$

$$-0.545$$

$$D_k = 70.7 \text{ (compression)}$$

MEMBER	$D_k (mm)$	$H (m)$	$a (m^2)$	$p = \frac{F}{a} / (N/m^2)$	$u$	$Pd$
AF	-70.71	4.24	0.0004	-176775	-0.471	85302615
AB	50	3	0.0004	125000	0.333	424575
BC	50	3	0.0004	125000	0.666	249750
BI	50	3	0.0004	125000	0.333	124875
FI	50	3	0.0004	125000	-0.333	-124875
IB	0	4.24	0.0004	0	-0.471	0
IC	50	3	0.0004	125000	1.000	579000
ED	-70.71	4.24	0.0004	-176775	-0.922	7060552
CD	50	3	0.0004	125000	0.666	249750

$$\frac{P_{UL}}{F} = \frac{2059455.24}{200000} = 10.2972$$