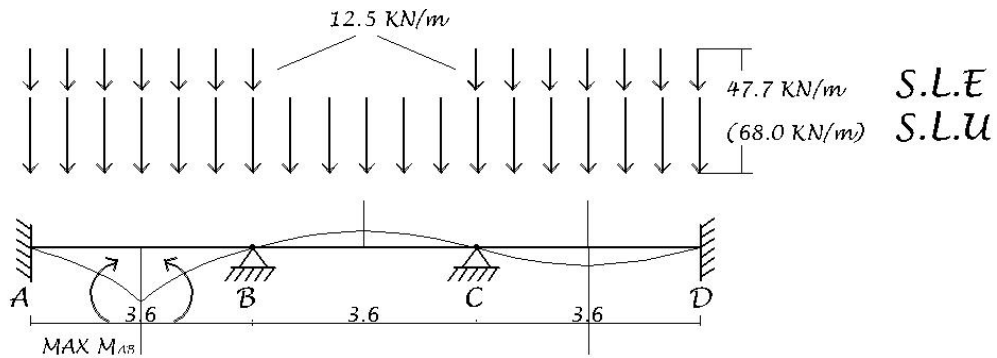


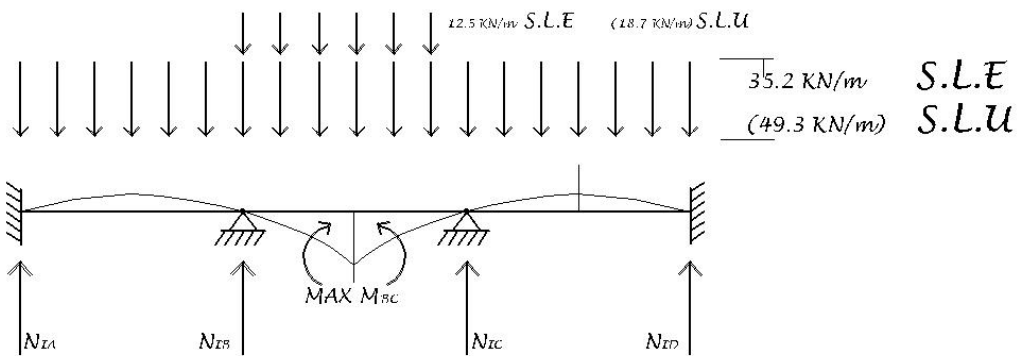
III.2.2 ANALISI DELLE SOLLECITAZIONI

SULLA TRAVE CENTRALE

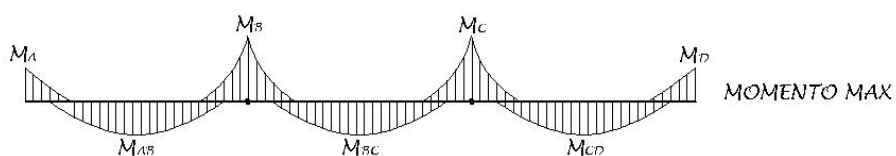
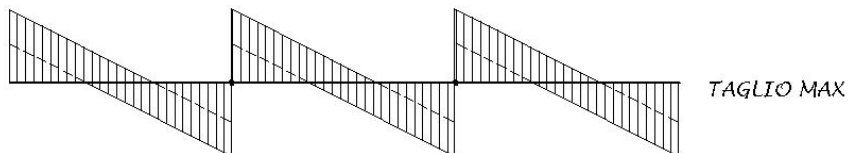
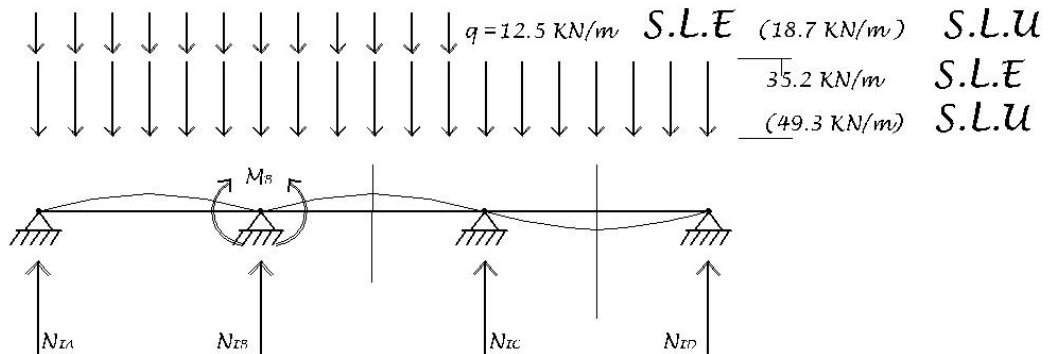
COMBINAZIONE MASSIMA MOMENTI POSITIVI 1° CAMPATA



COMBINAZIONE MASSIMA MOMENTI POSITIVI 2° CAMPATA



COMBINAZIONE MASSIMA MOMENTI NEGATIVI



risolvendo l'iperstatica con i valori tabulati

$$M_B = M_C \frac{l}{10} pl^2 + \frac{l}{8.55} ql^2 = 64.57 \text{ KN} \cdot \text{m} \quad (6.5 \text{ tm})$$

$$M_{AB} = \frac{l}{12.5} pl^2 + \frac{l}{9.9} ql^2 = 52.86 \text{ KN} \cdot \text{m} \quad (5.3 \text{ tm})$$

$$M_{BC} = \frac{l}{40} pl^2 + \frac{l}{13.4} ql^2 = 23.49 \text{ KN} \cdot \text{m} \quad (2.5 \text{ tm})$$

EQUAZIONI DI CONGRUENZA

$$l_{AB}(M_A + 2M_B) + l_{BC}(2M_B + M_C) = l_{AB}(\mu_{AB} + 2\mu_{AB}) + l_{BC}(\mu_{BC} + 2\mu_{CB})$$

per campate uguali $\mu = \frac{1}{12}(p+q)l^2 = 51.5 \text{ KN} / \text{m}$

Si approssima $M_A \cong \frac{M_B}{2}$; $M_C = M_B$

$$M_B = \frac{4}{3}\mu = 68.66 \text{ KN m} \cong 64.57 \text{ KN m} \quad \text{DA TABULAZIONE}$$

EQUAZIONE DI EQUILIBRIO

$$v_A + v_B - 47.7 \cdot 3.6 = 0 \quad V_A = 76.9 \text{ KN}$$

$$v_B \cdot 3.6 - 47.7 \frac{3.6^2}{2} + 64.57 - 64.57; \quad V_B = 94.8 \text{ KN}$$

Sul pilastro centrale B risulta: $N_B = 2 \cdot 94.8 = 189.6 \text{ kN} = 19 \text{ t}$

SEZIONE DI TAGLIO NULLO

$$V_A - px = 0 \quad x = \frac{76.9}{47.7} = 1.61 \text{ m}$$

MOMENTO MASSIMO POSITIVO $M_{AB} = 76.9 \cdot 1.61 - 47.7 \frac{1.61^2}{2} = 62.2 \text{ KNm}$

