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Mata Kuliah : Statika
Kode : CVL – 104
SKS : 3 SKS

Garis Pengaruh Pada Rangka Batang

Pertemuan – 15

- TIU :
  - Mahasiswa dapat menghitung reaksi perletakan pada struktur statis tertentu
  - Mahasiswa dapat menghitung gaya-gaya dalam momen, lintang dan normal pada struktur statis tertentu
- TIK :
  - Mahasiswa dapat menjelaskan konsep garis pengaruh

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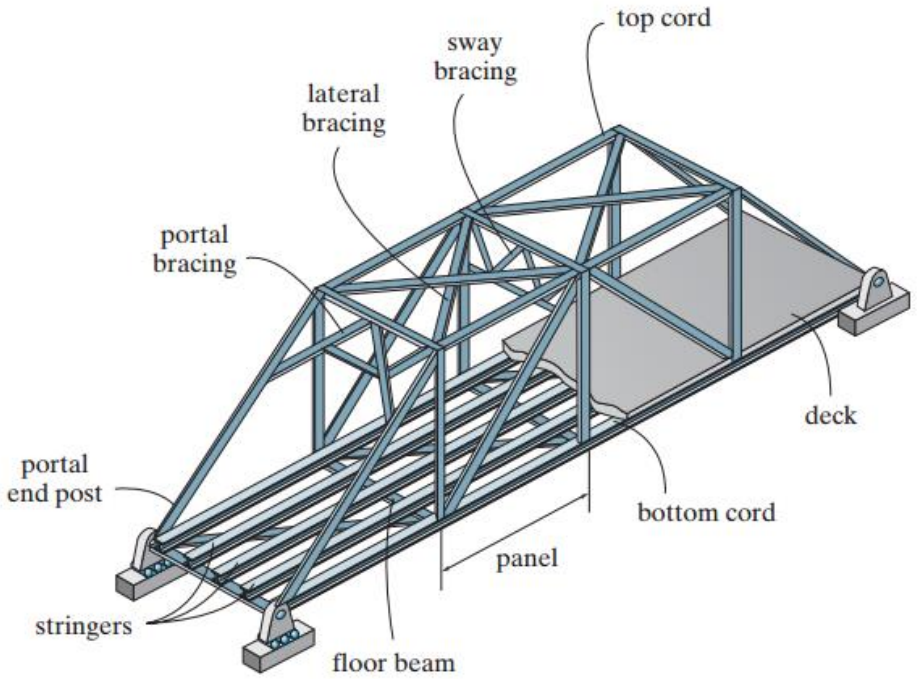
- Sub Pokok Bahasan :
  - Garis Pengaruh Gaya Batang

- the loading on the bridge deck is transmitted to stringers, which in turn transmit the loading to floor beams and then to the *joints* along the bottom cord of the truss.

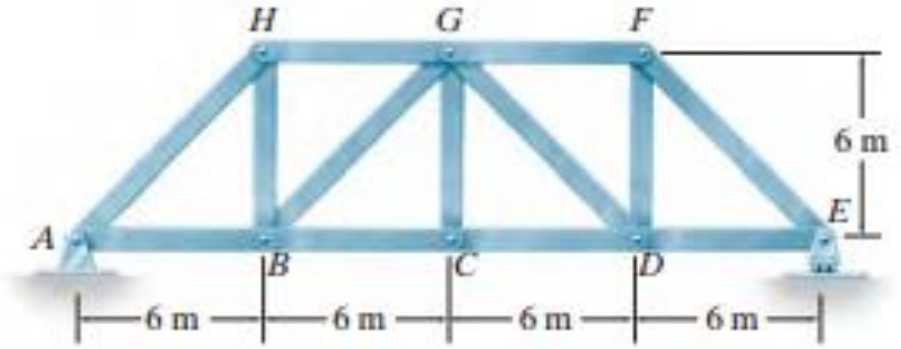


- Since the truss members are affected only by the joint loading, we can therefore obtain the ordinate values of the influence line for a member by loading each joint along the deck with a unit load and then use the method of joints or the method of sections to calculate the force in the member.
- The data can be arranged in tabular form, listing “unit load at joint” versus “force in member.”

- As a convention, if the member force is *tensile* it is considered a *positive* value; if it is *compressive* it is *negative*.
- The influence line for the member is constructed by plotting the data and drawing straight lines between the points

Example 1

- Draw the influence line for the force in member *GB and CG* of the bridge truss shown in Figure



Example 2

- Determine the maximum compressive force developed in member *BG* of the side truss in Figure due to the right side wheel loads of the car and trailer.
- Assume the loads are applied directly to the truss and move only to the right.