

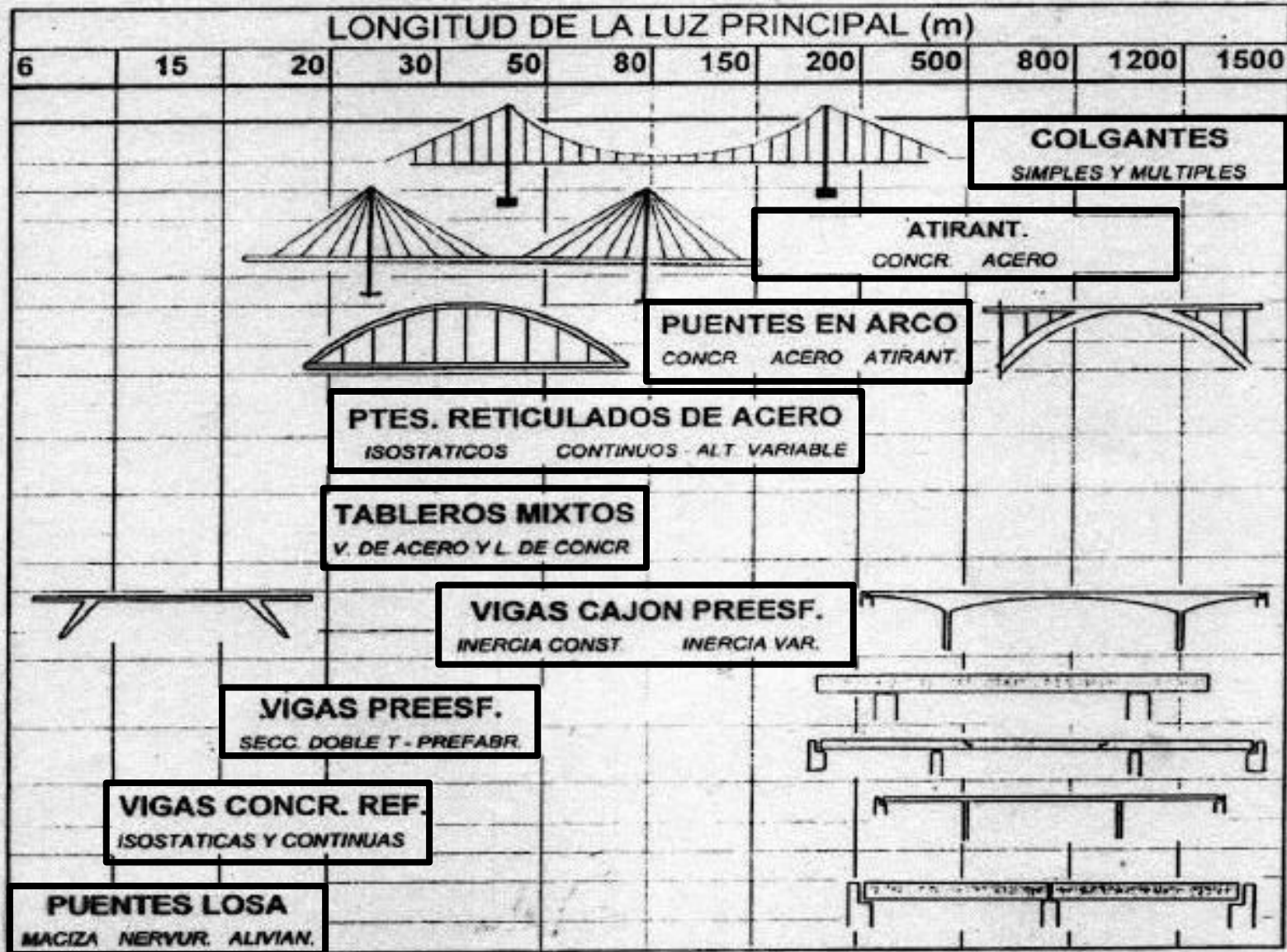
INTRODUCCION A LA INGENIERIA CIVIL

TALLER DEL PUENTE

Parte 2

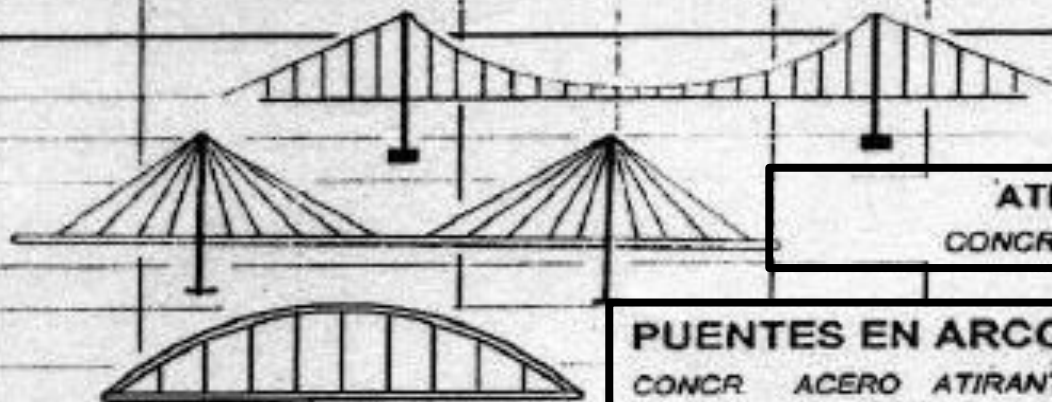


Tipos de puente



LONGITUD DE LA LUZ PRINCIPAL (m)

6	15	20	30	50	80	150	200	500	800	1200	1500
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COLGANTES
SIMPLES Y MULTIPLES

ATIRANT.
CONCR. ACERO

PUENTES EN ARCO
CONCR. ACERO ATIRANT.

PTES. RETICULADOS DE ACERO
ISOSTATICOS CONTINUOS - ALT. VARIABLE

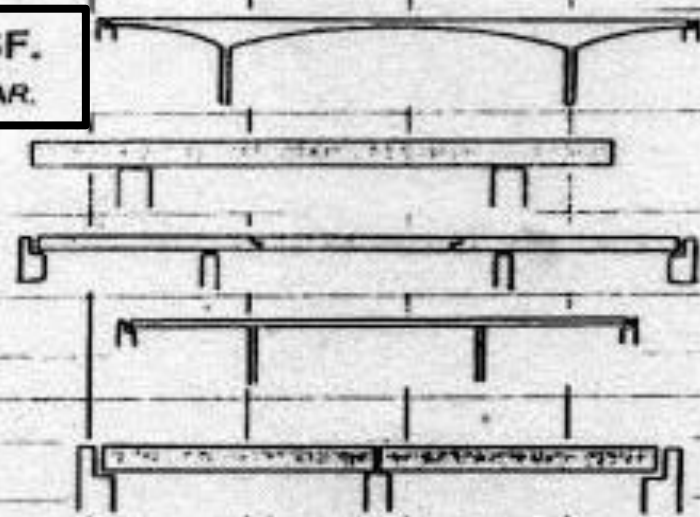
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V. DE ACERO Y L. DE CONCR.

VIGAS CAJON PREESF.
INERCIA CONST. INERCIA VAR.

VIGAS PREESF.
SECC. DOBLE T - PREFABR.

VIGAS CONCR. REF.
ISOSTATICAS Y CONTINUAS

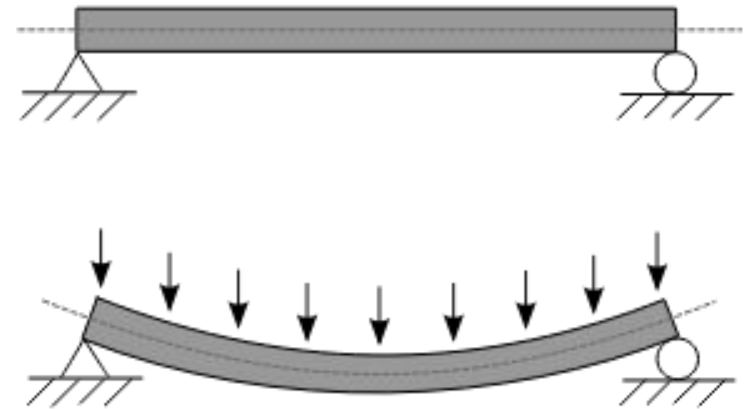
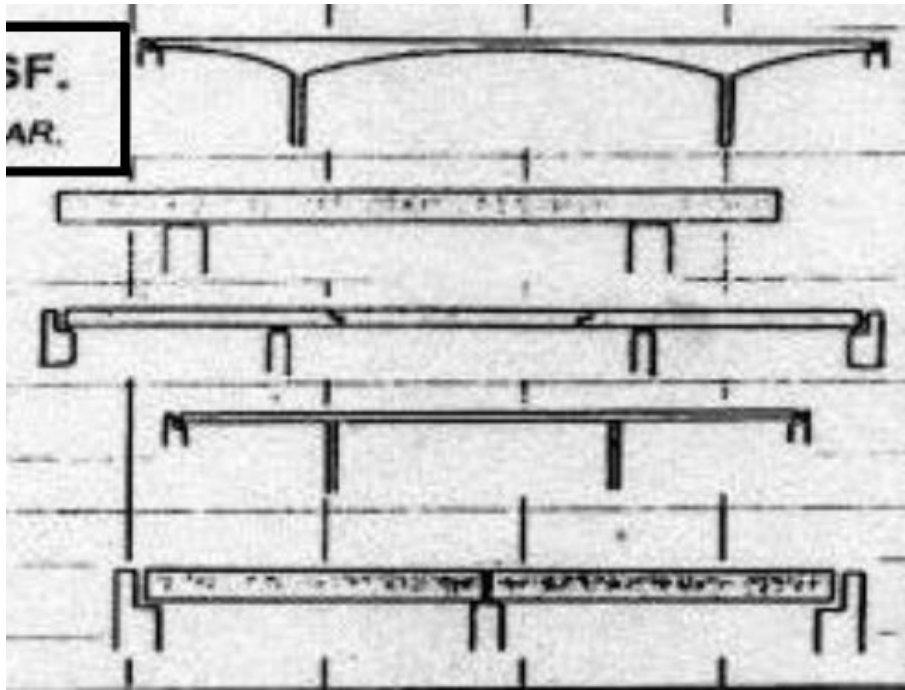
PUENTES LOSA
MACIZA NERVUR. ALIVIAN.





Tipos de puente

A flexión





Tipos de puente



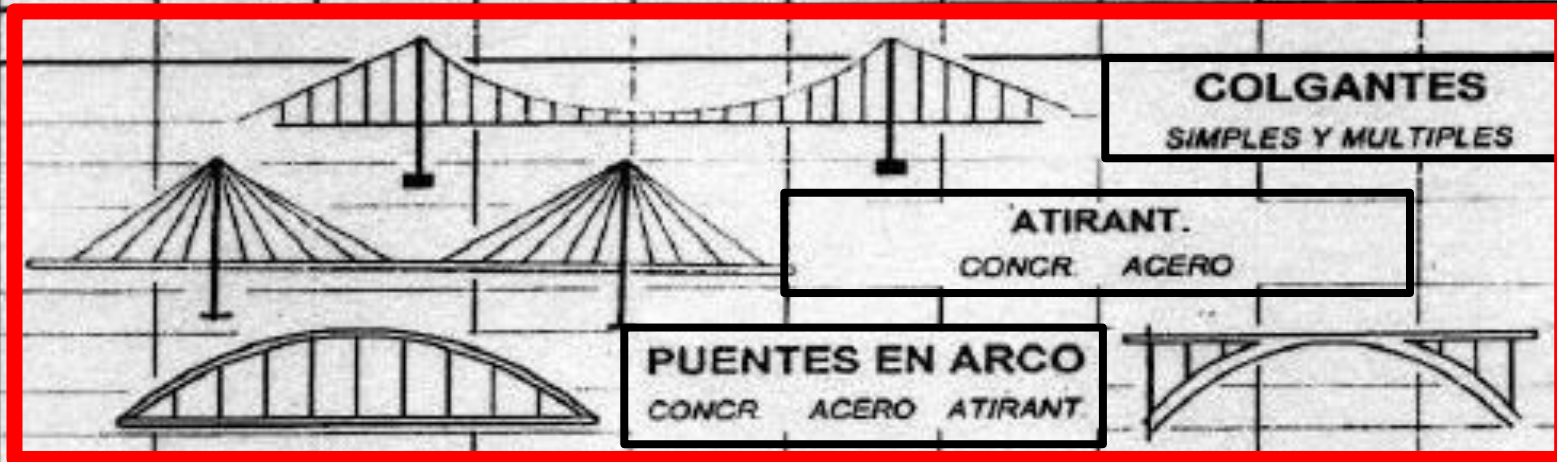
A flexión



Viaducto Mitre-Tigre

LONGITUD DE LA LUZ PRINCIPAL (m)

6 15 20 30 50 80 150 200 500 800 1200 1500



PTES. RETICULADOS DE ACERO
ISOSTATICOS CONTINUOS - ALT. VARIABLE

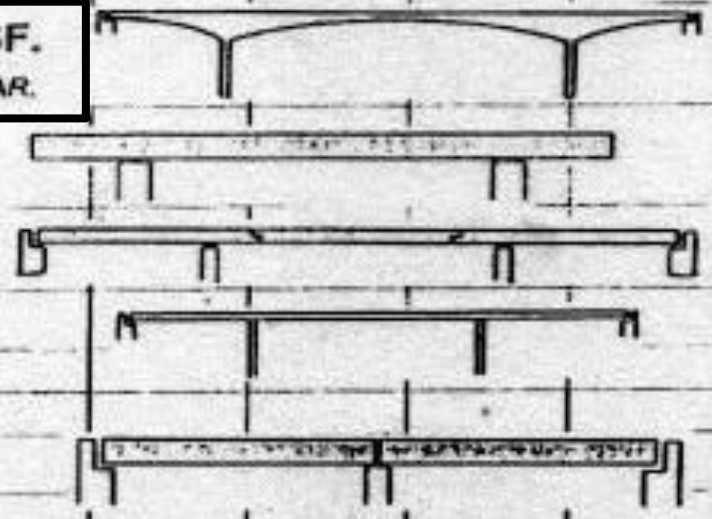
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VIGAS CONCR. REF.
ISOSTATICAS Y CONTINUAS

PUENTES LOSA
MACIZA NERVUR. ALIVIAN.

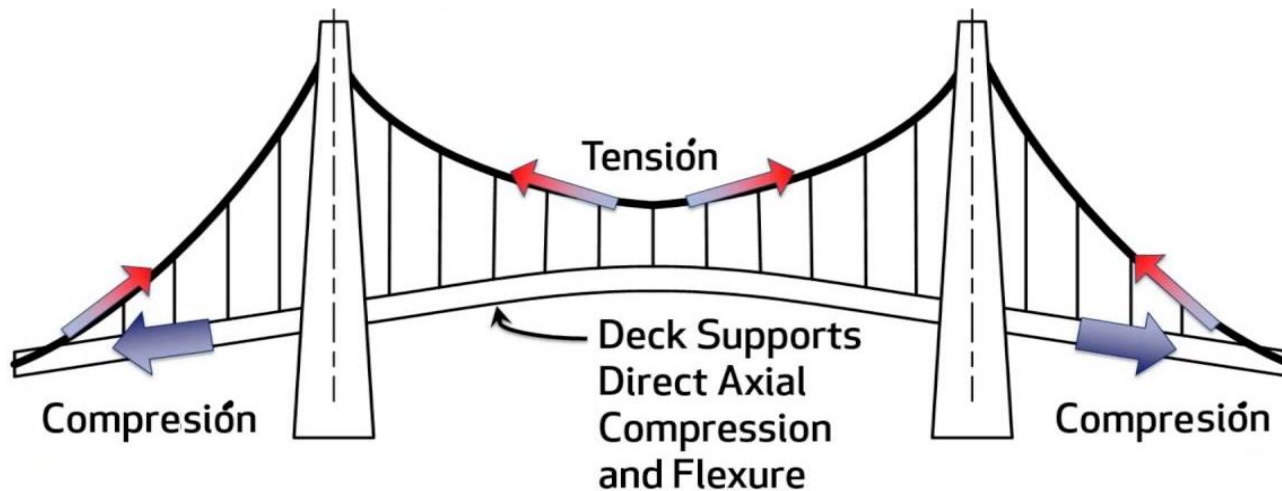
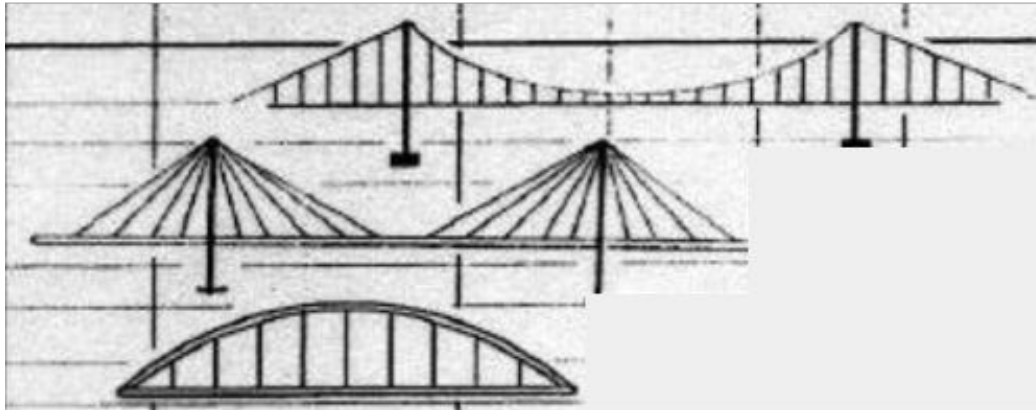




Tipos de puente



Atirantados / Colgantes





Tipos de puente



Atirantados / Colgantes



Golden Gate, San Francisco



Tipos de puente



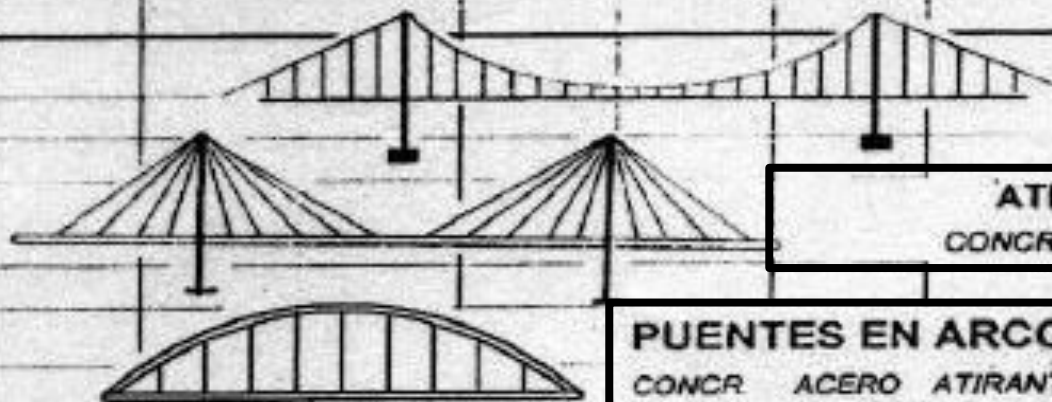
Atirantados / Colgantes



Puente Centenario, Canal de Panamá

LONGITUD DE LA LUZ PRINCIPAL (m)

6	15	20	30	50	80	150	200	500	800	1200	1500
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COLGANTES
SIMPLES Y MULTIPLES

ATIRANT.
CONCR. ACERO

PUENTES EN ARCO
CONCR. ACERO ATIRANT.

PTES. RETICULADOS DE ACERO
ISOSTATICOS CONTINUOS - ALT. VARIABLE

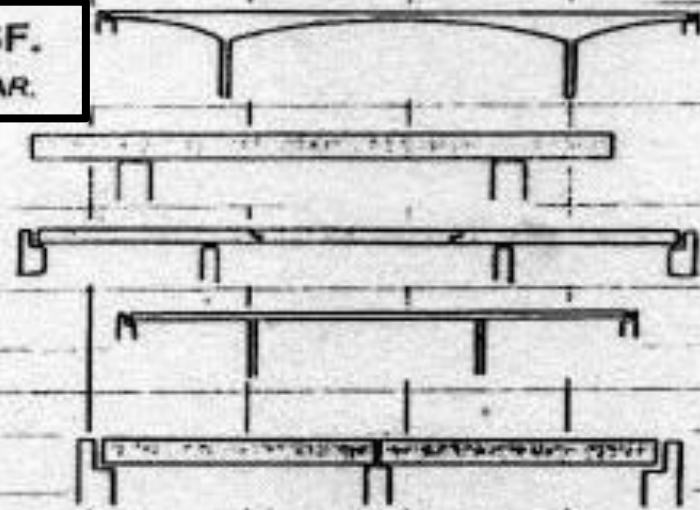
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V. DE ACERO Y L. DE CONCR.

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VIGAS PREESF.
SECC. DOBLE T - PREFABR.

VIGAS CONCR. REF.
ISOSTATICAS Y CONTINUAS

PUENTES LOSA
MACIZA NERVUR. ALIVIAN.





Reticulados



*“Estructura formada por elementos rectos (barras) que conforman **triángulos** (figura indeformable) y trabajan a tensión de tracción o compresión”*

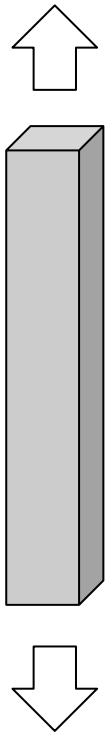




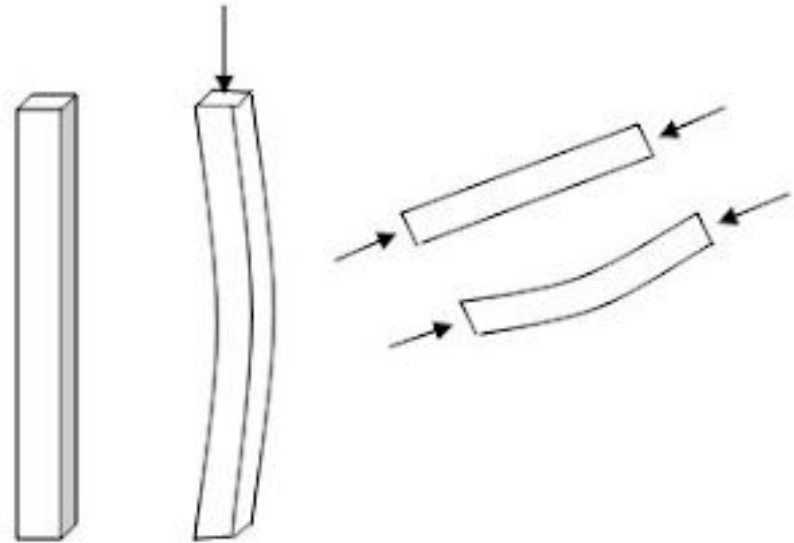
Funcionamiento Estructural



Tracción



Compresión

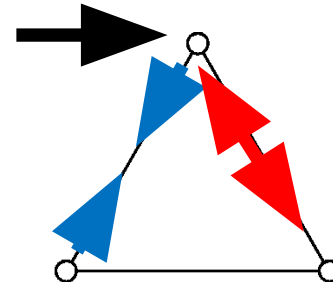
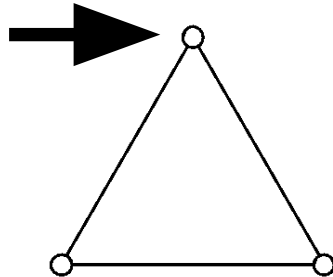
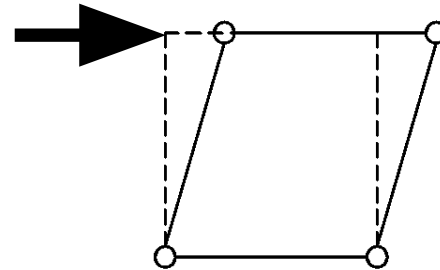
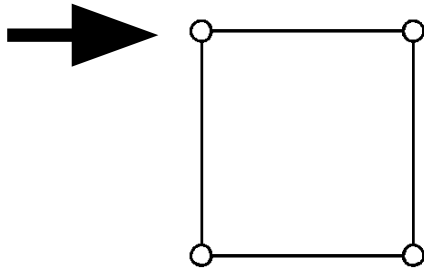




Funcionamiento Estructural



Sistemas reticulados

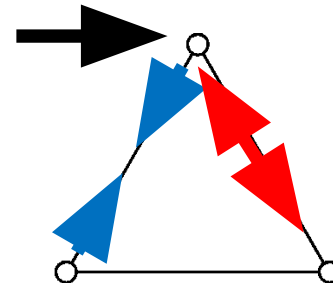
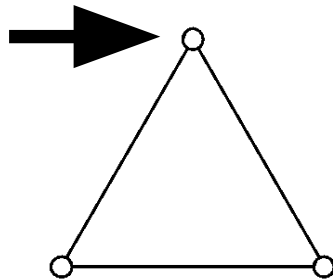
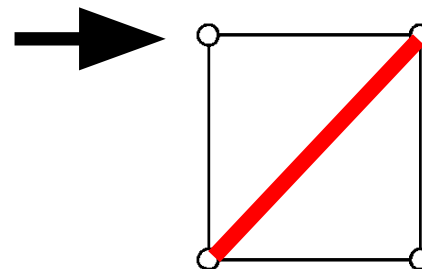
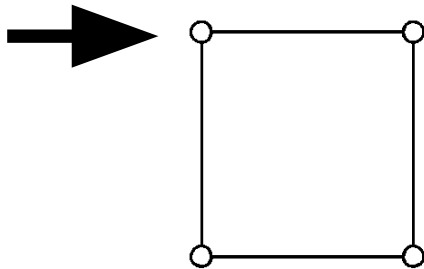




Funcionamiento Estructural

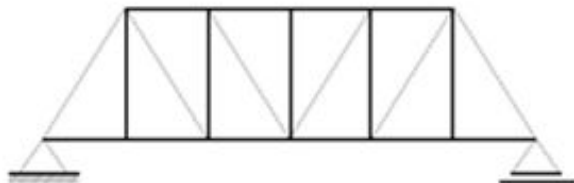
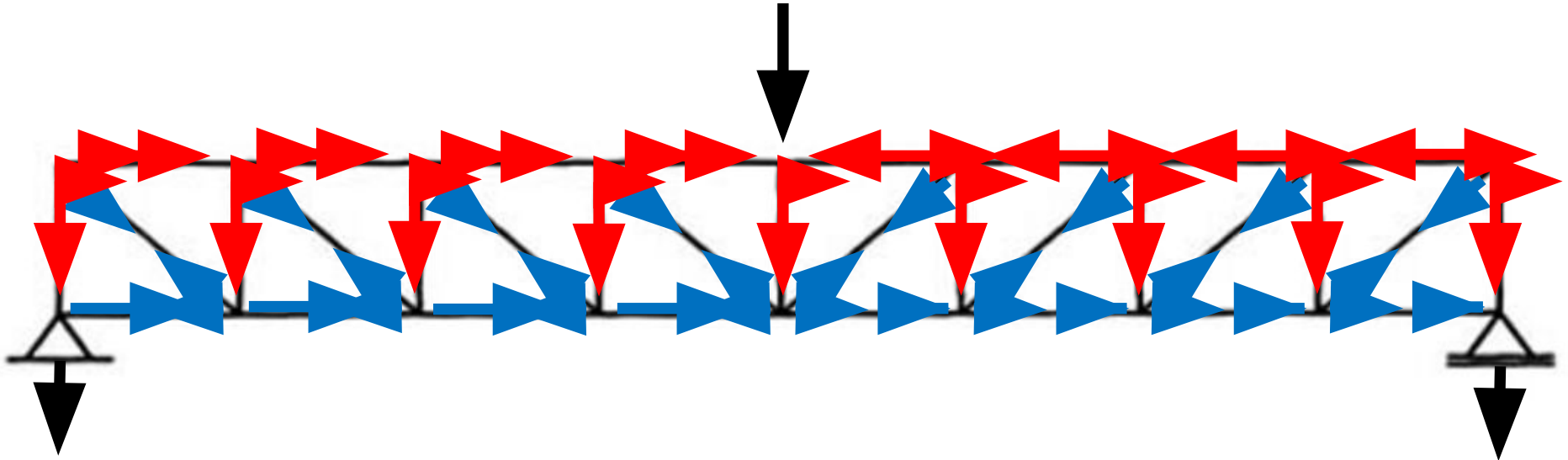


Sistemas reticulados

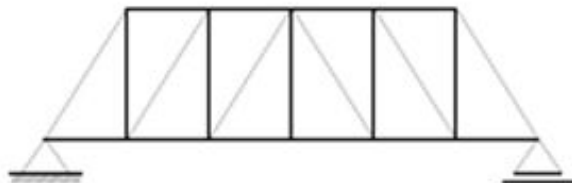




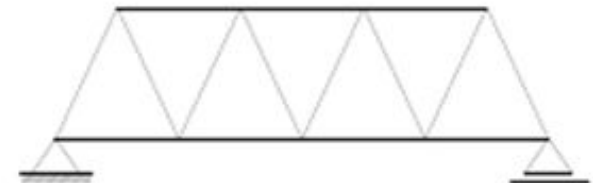
Funcionamiento Estructural



Pratt



Howe



Warren



Tipos de puente



Fink roof truss



Fan roof truss



King Post roof truss



Howe roof truss



Pratt roof truss



Modified Queen roof truss



Howe bridge truss



Pratt bridge truss



Warren bridge truss



Parker bridge truss



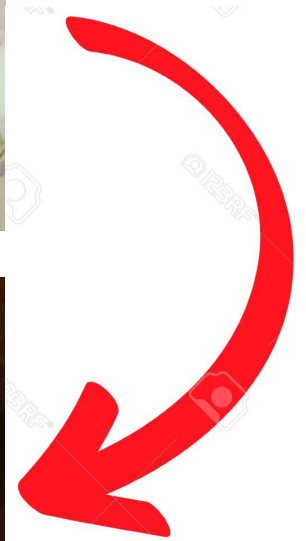
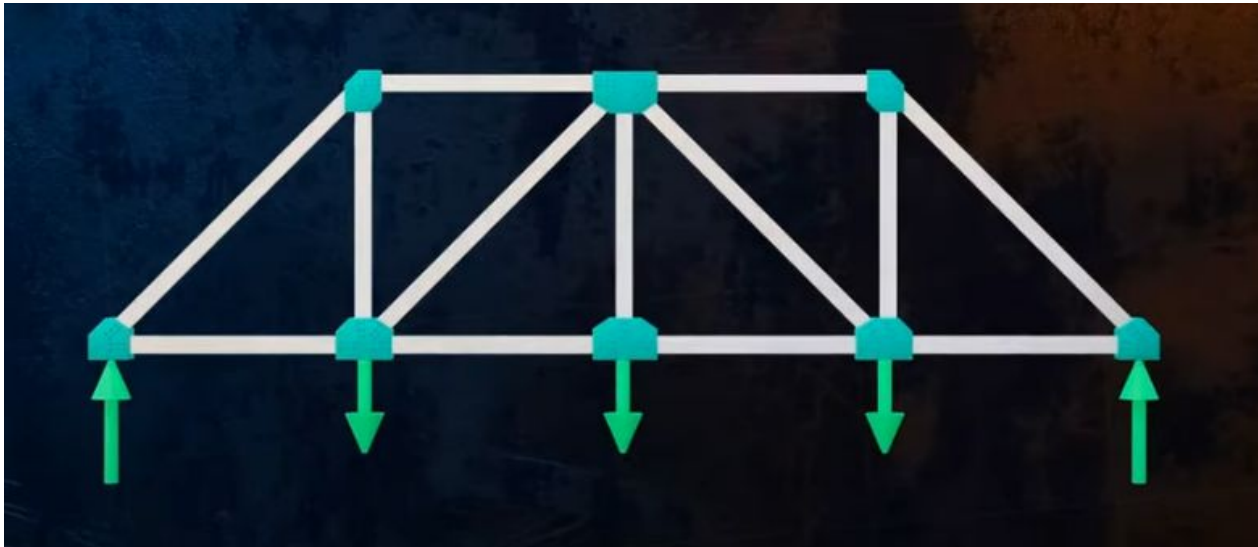
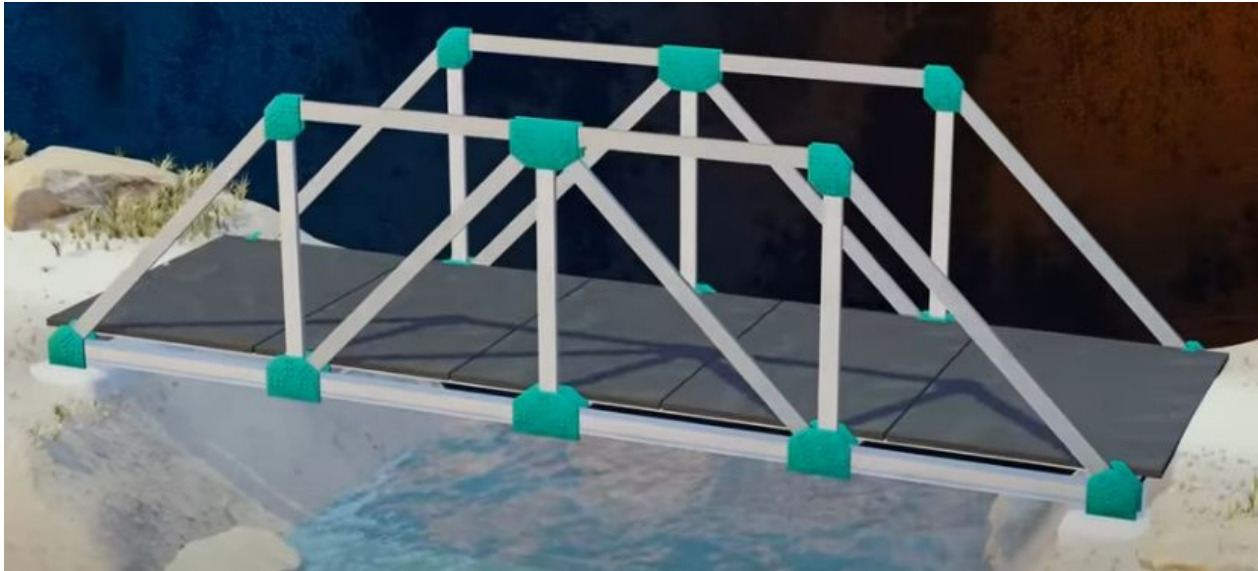
Baltimore bridge truss



K bridge truss

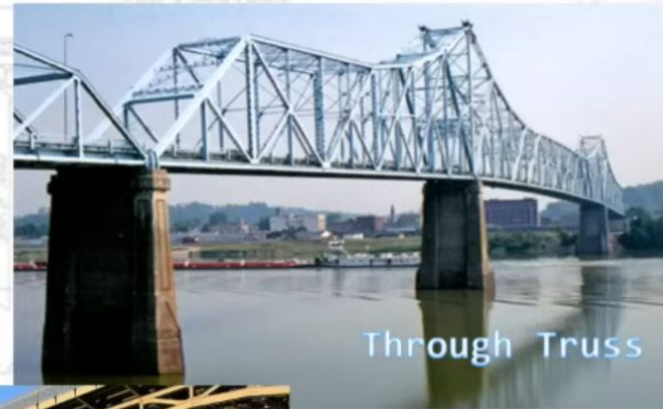


Tipos de puente





Tipos de puente



Tipos de puente



Puentes en Google Street View:

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Tipos de puentes't



Estructuras antisísmicas



Torres de alta tensión

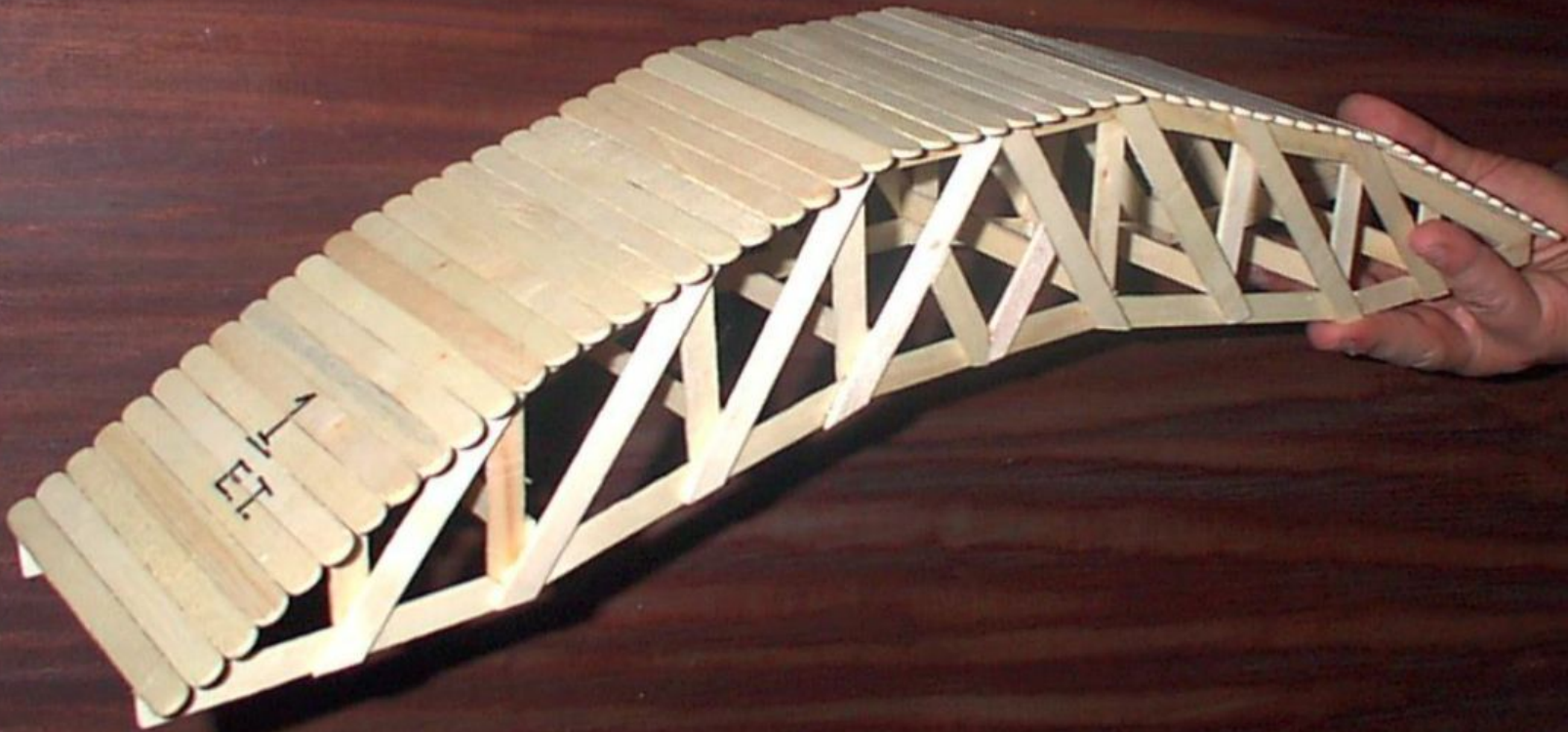


CONTINUACIÓN DEL TALLER

Modelo a escala



Modelos Estructurales

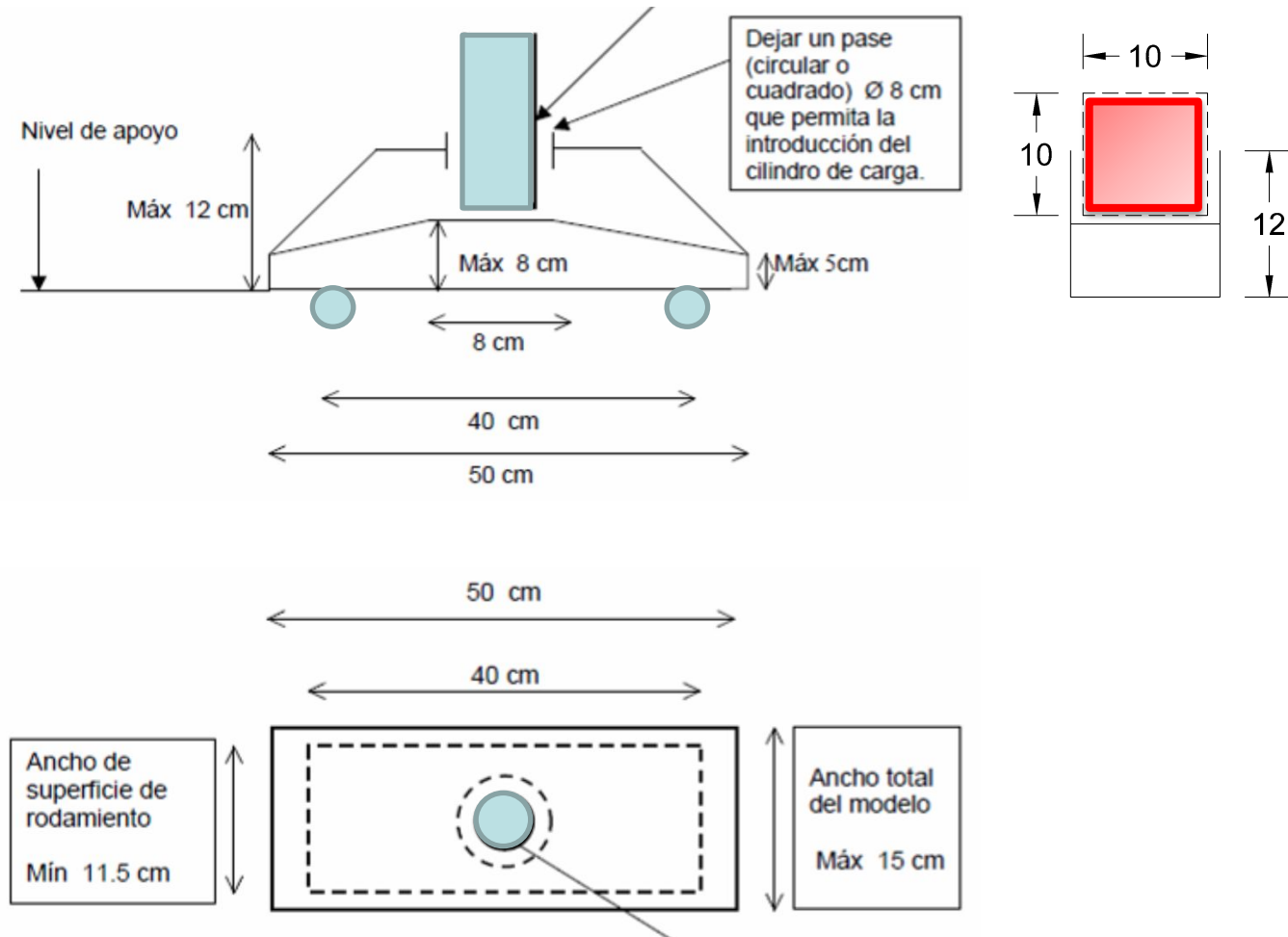




Geometría



Descargar y leer atentamente el Reglamento





Eficiencia



$$E = P / G$$

E = Eficiencia del Modelo

P = Carga de Colapso del modelo

G = Peso del modelo

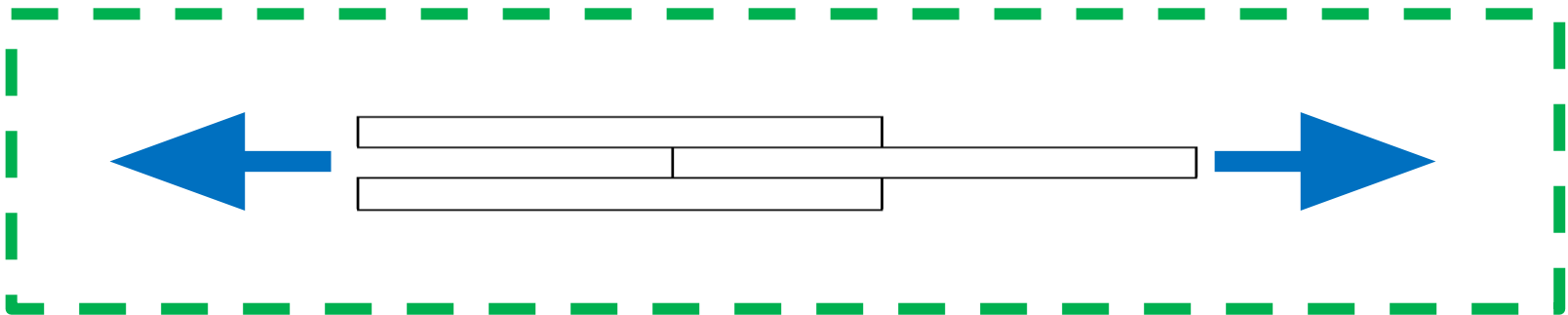
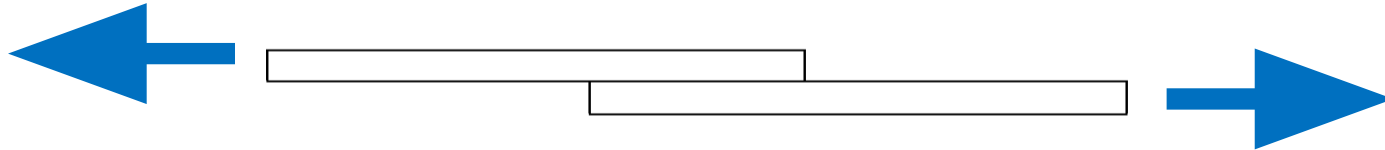


Ensayos preliminares



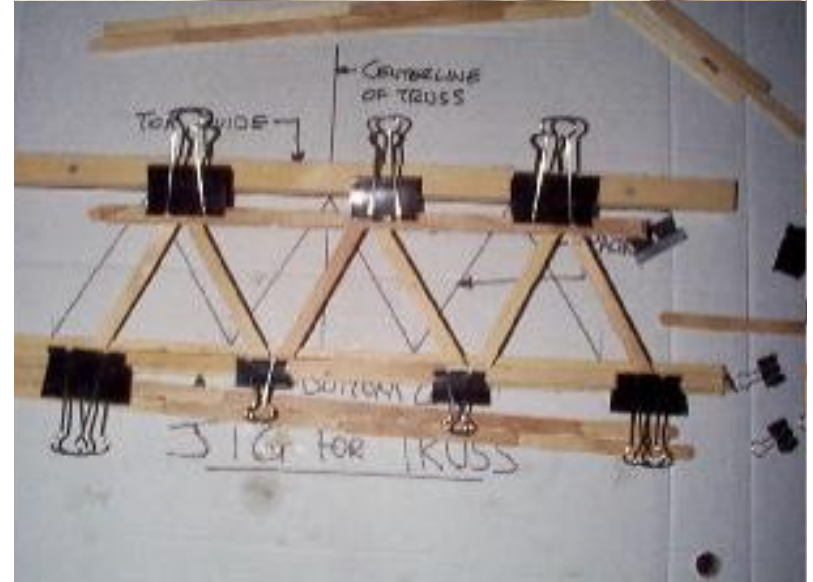


Uniones





Uniones

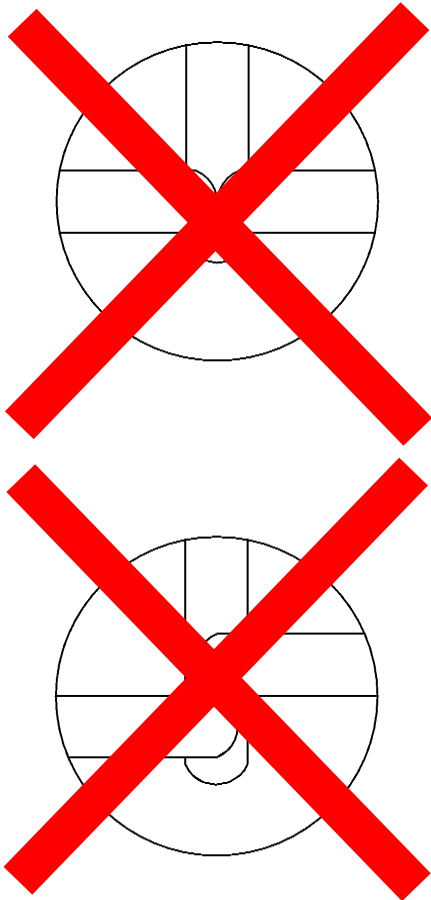




Propiedades de la Madera



La madera es un material organico constituido por fibras que le dan resistencia en una dirección principal



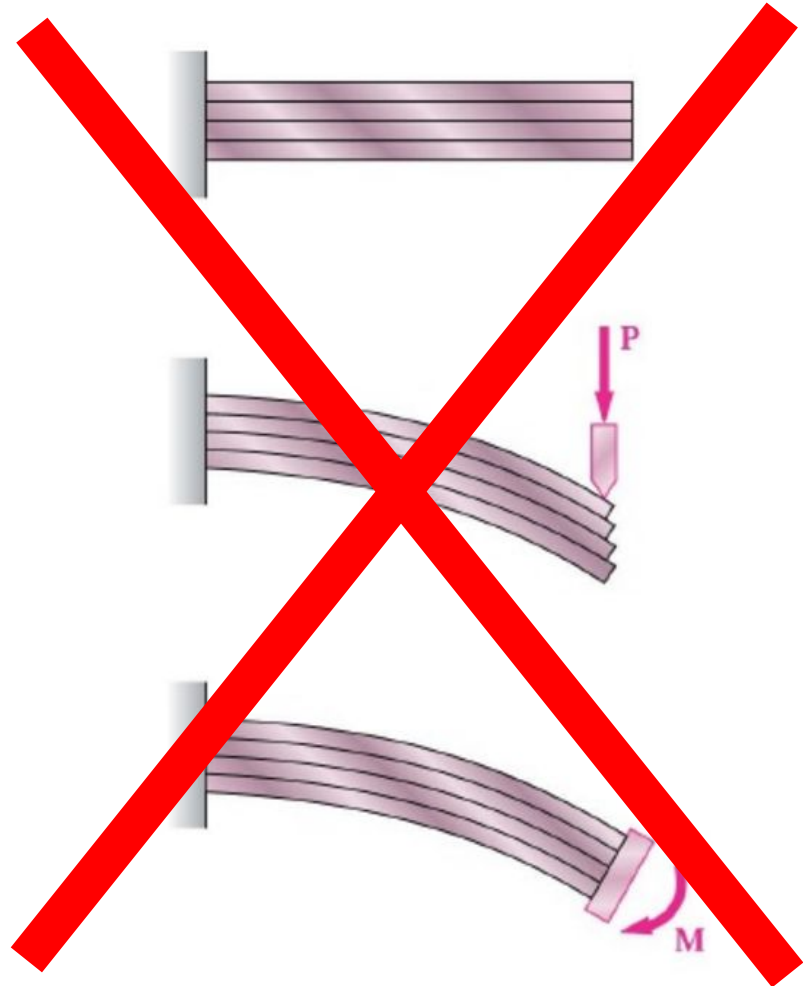


Multilaminado





Multilaminado





Ensayo



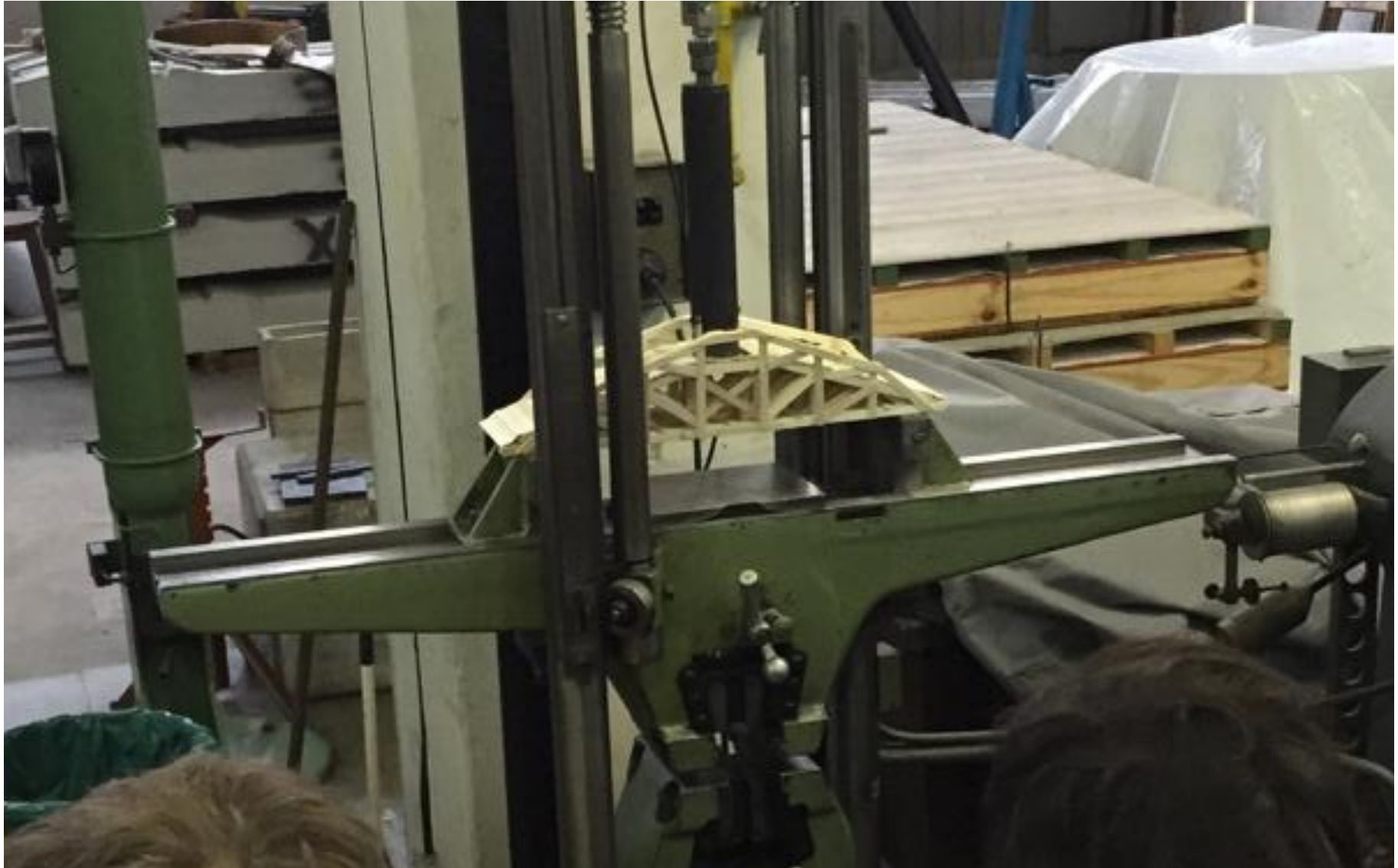


Ensayo





Fallas locales





Modelos Estructurales



Mucha suerte

Gracias por su atención