

Project: Frame1
Description:
Project file: C:\Users\majsh231\OneDrive - Örebro universitet\konstruktion år 1\Fram1.fra

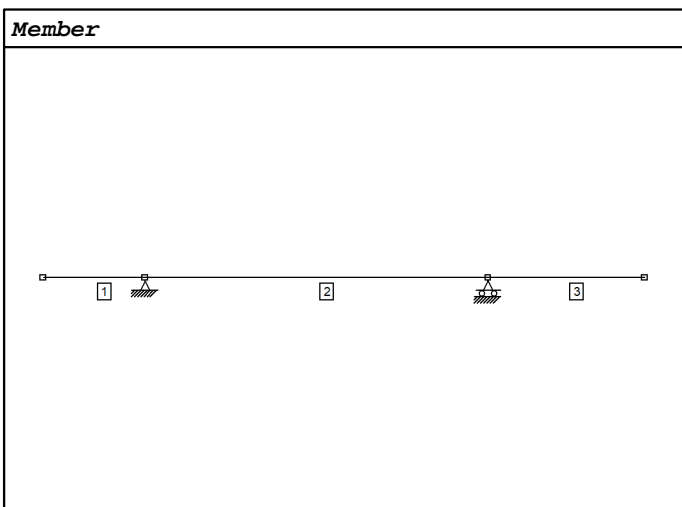
Date: 2024-02-29
Made by:
Company name:

Joints

	X (m)	Y (m)	X	Y	M		X (m)	Y (m)	X	Y	M		X (m)	Y (m)	X	Y	M		X (m)	Y (m)	X	Y	M	
A	0	0				B	2.800	0	R	R		C	12.200	0	R				D	16.500	0			

Member

Name	Joint 1	Joint 2	Initial-	Name	Joint 1	Joint 2	Initial-
	(H=Hinge)	(H=Hinge)	bow imperfection.		(H=Hinge)	(H=Hinge)	bow imperfection.
1	A	B	No	3	C	D	No
2	B	C	No				



Section data

Name	Dir.	Area	I	h	z	E-modulus	Cost (kr)
		(m ²)	(m ⁴)	(m)	(m)	(kN/m ²)	
HEA 500 / S355	y-y	1.975e-2	8.70e-4	0.490	0.245	2.10e8	

EN 1992-1-1 (Swedish annex)

Mould costs

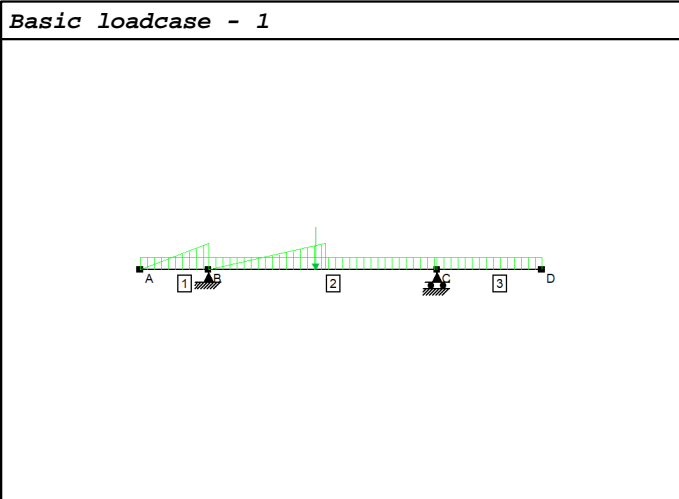
	hour/m ²	kr/m ²		hour/m ²	kr/m ²
Beam mould	0.80	50.00	Column mould	0.90	50.00

Work salary: 220kr/hour

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Basic loadcase: 1



Uniform load

Member	Dir.	Load intensity	L1(m)	L2(m)	Member	Dir.	Load intensity	L1(m)	L2(m)
1	Y / q(kN/m)	30.000	0	0	3	Y / q(kN/m)	30.000	0	0
2	Y / q(kN/m)	30.000	0	0					

Point load

Member	Dir.	Load intensity	L(m)
2	Y / P(kN)	103.000	4.400

Trapezoid load

Member	Dir.	Load intensity	Loads	L1(m)	L2(m)
1	Y / q1(kN/m)	0	64.000	0	0
2	Y / q1(kN/m)	0	64.000	0	4.600

Basic loadcase

Name	Des.
1	B1

Loadcase

	Name	Combination	Limit	Type	Dependency
1	1	B1	ULS		

Results

Max pos. moment - 1. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	0	0	0	1	3	0	0	0	1
2	590.674	27.933	0	1					

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Max pos. moment - 2. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	0	0	0	1	3	0	0	0	1
2	590.674	27.933	0	1					

Max neg. moment - 1. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	-277.350	129.000	0	1
2	-277.350	-249.600	0	1					

Max neg. moment - 2. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	-277.350	129.000	0	1
2	-277.350	-249.600	0	1					

Max stresses - 1. order

Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase
1	56.7	1	2	166.4	1	3	78.1	1

Max stresses - 2. order

Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase
1	56.7	1	2	166.4	1	3	78.1	1

Max pos. shear force - 1. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	0	0	0	1	3	-277.350	129.000	0	1
2	-201.227	289.000	0	1					

Max pos. shear force - 2. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	0	0	0	1	3	-277.350	129.000	0	1
2	-201.227	289.000	0	1					

Min neg. shear force - 1. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	0	0	0	1
2	-277.350	-249.600	0	1					

Min neg. shear force - 2. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	0	0	0	1
2	-277.350	-249.600	0	1					

Min neg. stresses - 1. order

Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase
1	-56.7	1	2	-166.4	1	3	-78.1	1

Min neg. stresses - 2. order

Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase
1	-56.7	1	2	-166.4	1	3	-78.1	1

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Max abs. moment - 1. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	-277.350	129.000	0	1
2	590.674	27.933	0	1					

Max abs. moment - 2. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	-277.350	129.000	0	1
2	590.674	27.933	0	1					

Max abs. shear force - 1. order

Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	-277.350	129.000	0	1
2	-201.227	289.000	0	1					

Max abs. shear force - 2. order

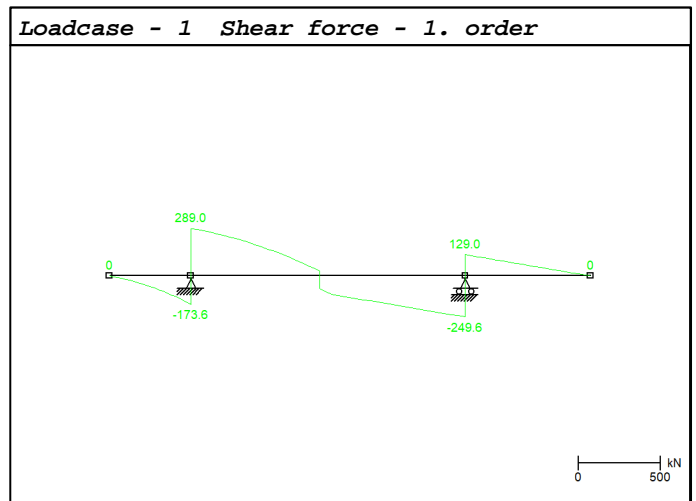
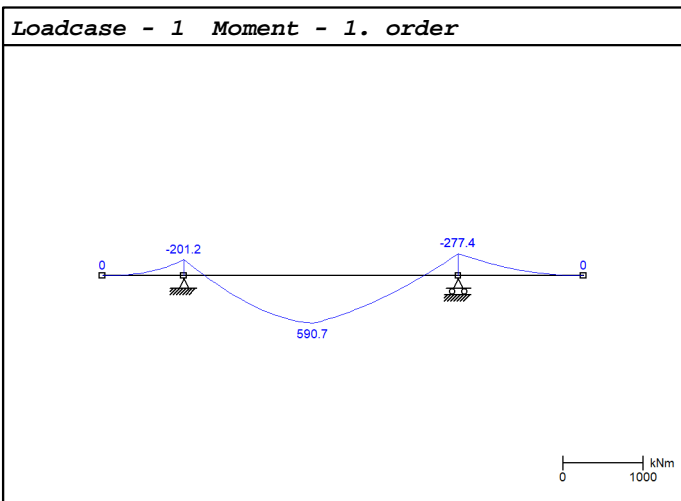
Member	M kNm	V kN	N kN	Loadcase	Member	M kNm	V kN	N kN	Loadcase
1	-201.227	-173.600	0	1	3	-277.350	129.000	0	1
2	-201.227	289.000	0	1					

Max abs. stresses - 1. order

Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase
1	56.7	1	2	166.4	1	3	78.1	1

Max abs. stresses - 2. order

Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase	Member	Sig MPa	Loadcase
1	56.7	1	2	166.4	1	3	78.1	1



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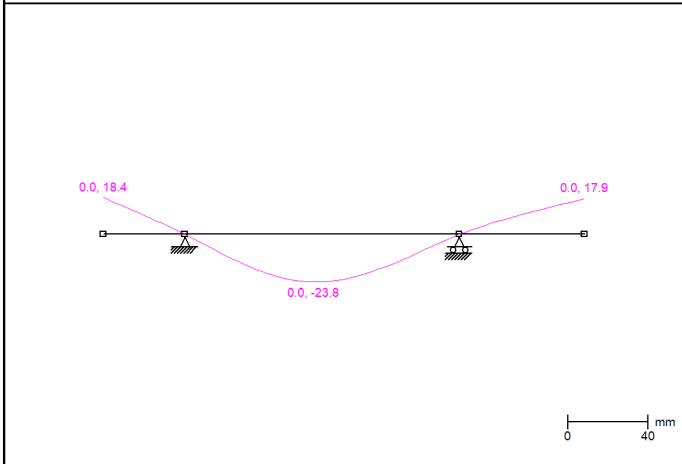
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Loadcase - 1 Deflection - 1. order



Support reactions - 1. order Loadcase: 1

Joint	Rx kN	Ry kN	Rm kNm	Joint	Rx kN	Ry kN	Rm kNm
B	0	462.600	0	C	0	378.600	0

Loadcase: 1

Member	Ratio of utilization	Member	Ratio of utilization	Member	Ratio of utilization
2	0.880	3	0.204	1	0.148

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Index

Joints	1
Member	1
Picture:Member	1
Section data	1
EN 1992-1-1 (Swedish annex)	1
Mould costs	1
Work salary: 220kr/hour	1
Basic loadcase: 1	2
Picture:Basic loadcase - 1	2
Uniform load	2
Point load	2
Trapezoid load	2
Basic loadcase	2
Loadcase	2
Results	2
Max pos. moment - 1. order	2
Max pos. moment - 2. order	3
Max neg. moment - 1. order	3
Max neg. moment - 2. order	3
Max stresses - 1. order	3
Max stresses - 2. order	3
Max pos. shear force - 1. order	3
Max pos. shear force - 2. order	3
Min neg. shear force - 1. order	3
Min neg. shear force - 2. order	3
Min neg. stresses - 1. order	3
Min neg. stresses - 2. order	3
Max abs. moment - 1. order	4
Max abs. moment - 2. order	4
Max abs. shear force - 1. order	4
Max abs. shear force - 2. order	4
Max abs. stresses - 1. order	4
Max abs. stresses - 2. order	4
Picture:Loadcase - 1 Moment - 1. order	4
Picture:Loadcase - 1 Shear force - 1. order	4
Picture:Loadcase - 1 Deflection - 1. order	5
Support reactions - 1. order Loadcase: 1	5
Loadcase: 1	5