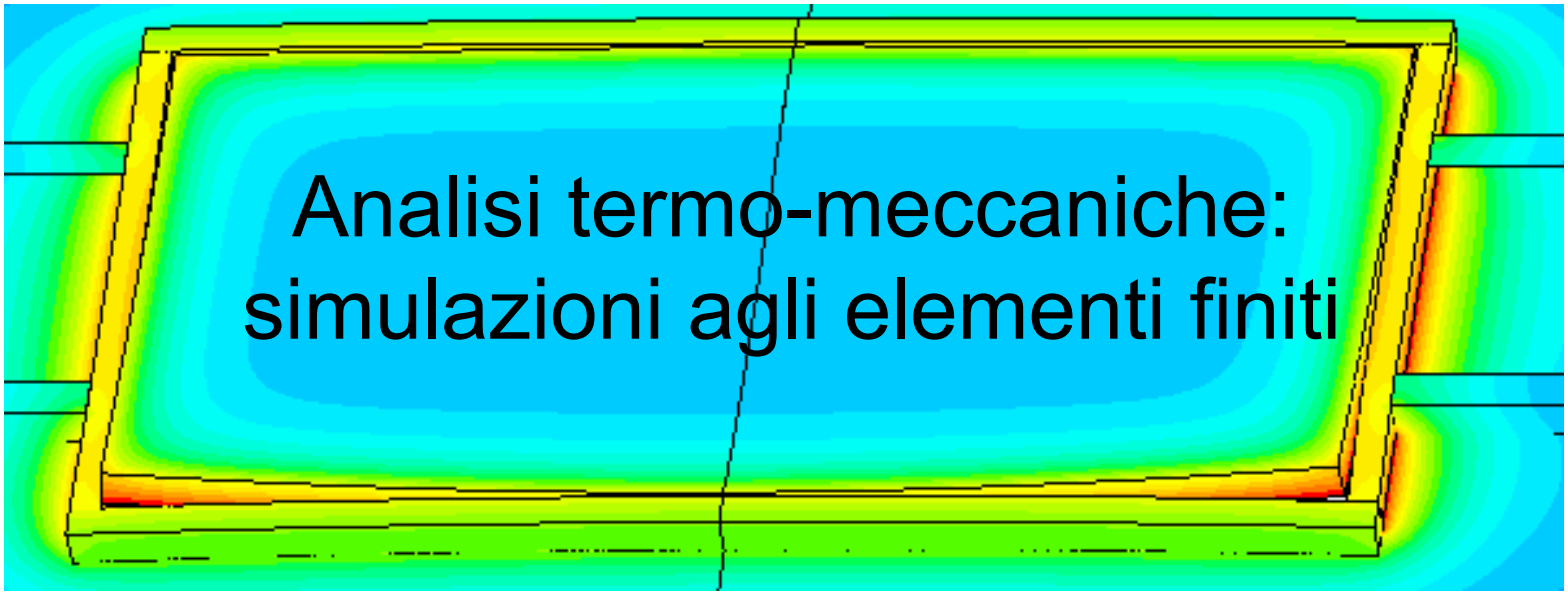
02 luglio 2015

Workshop

IL VALORE AGGIUNTO DELLA SIMULAZIONE PER L'INDUSTRIA

" Tecniche di simulazione e progettazione per

prevedere, garantire e mantenere le performance dei prodotti "



Luciano Moro

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Introduzione

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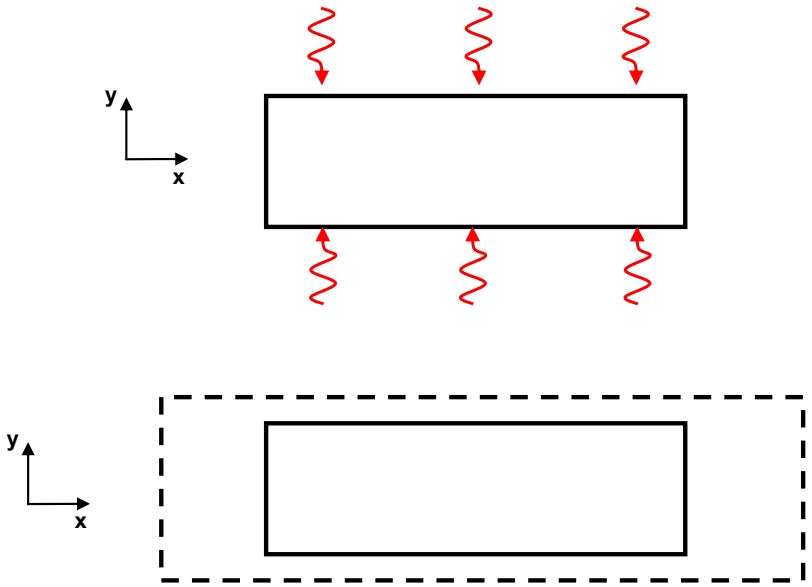
Modelli analitici

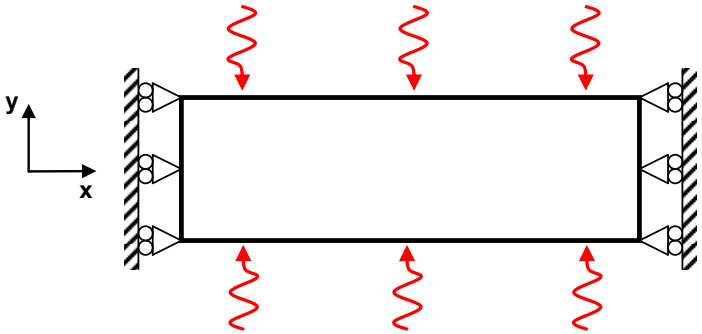
Espansione libera



$$\Delta T = T_f - T_i$$

$$\text{Allungamento}: \quad \alpha \, \Delta T \, l$$

Espansione vincolata



$$\varepsilon_{tot} = \varepsilon_{mec} + \varepsilon_{th} = 0$$

$$-\varepsilon_{th} = -\alpha \, \Delta T = \varepsilon_{mec} = \varepsilon_{el} + \varepsilon_{pl}$$

$$\sigma_x = E \varepsilon_{mec} = -E \alpha \Delta T$$

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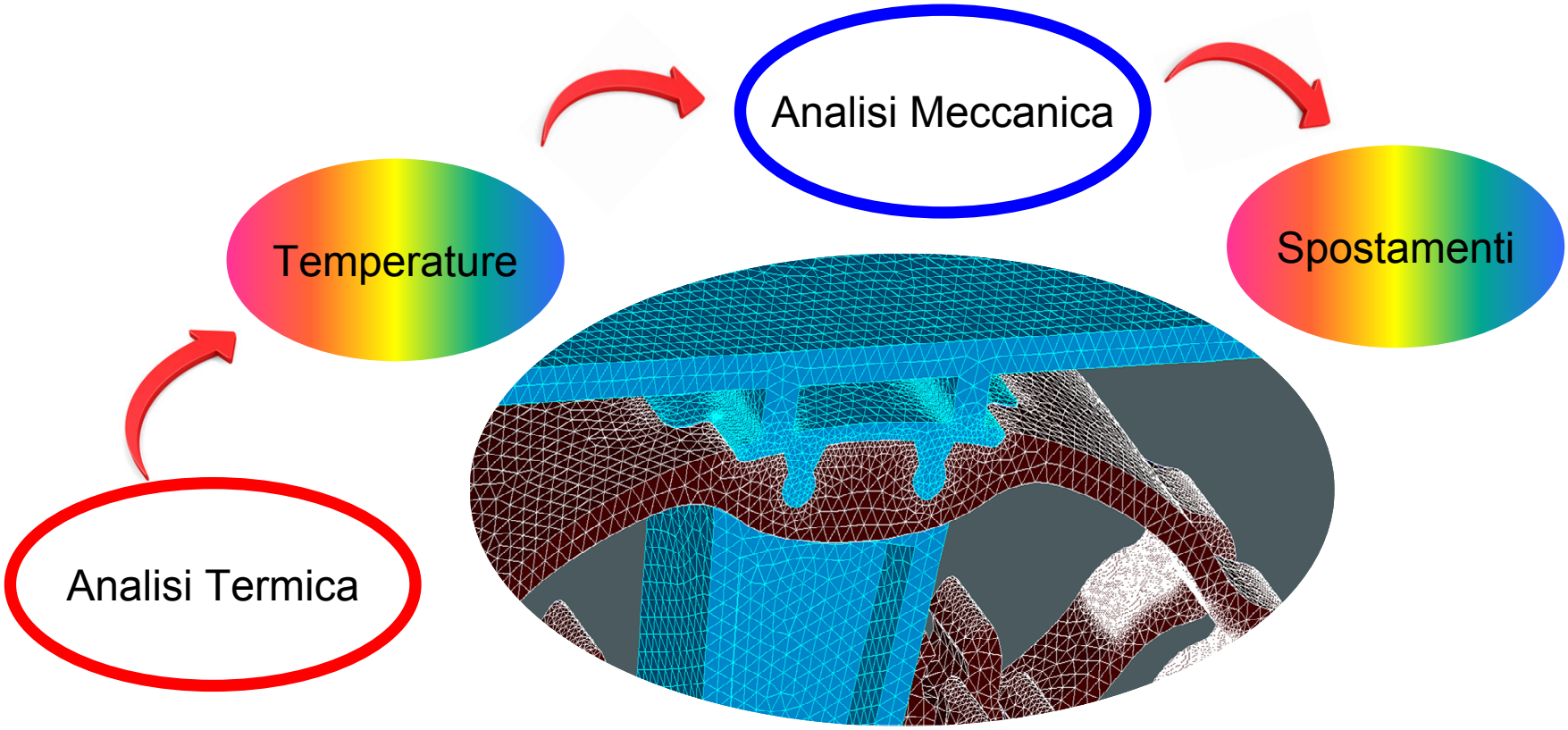
Modellazione a Elementi Finiti



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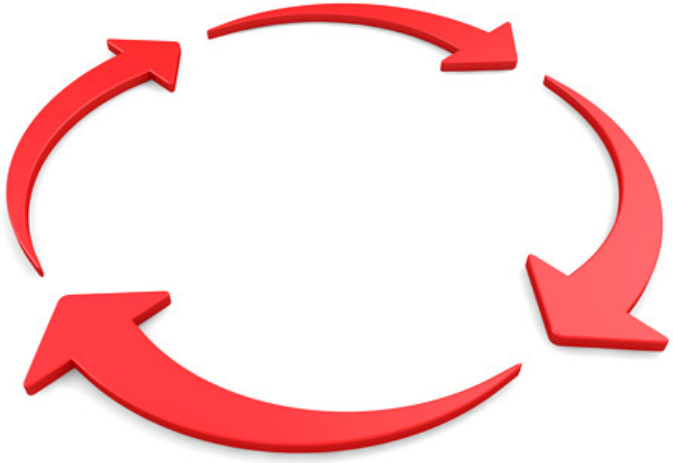
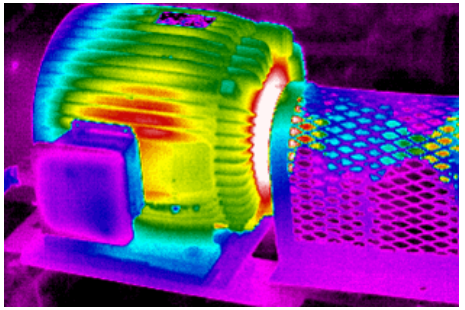
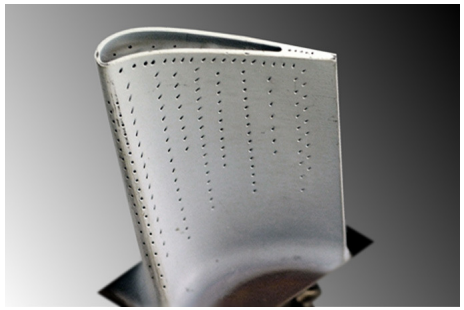
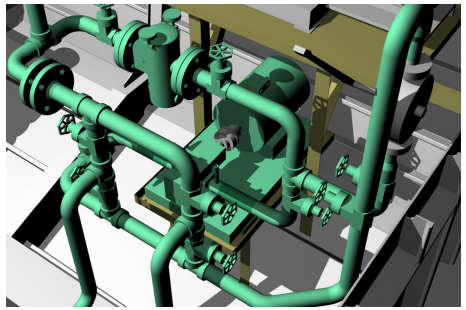
Ambiti di applicazione









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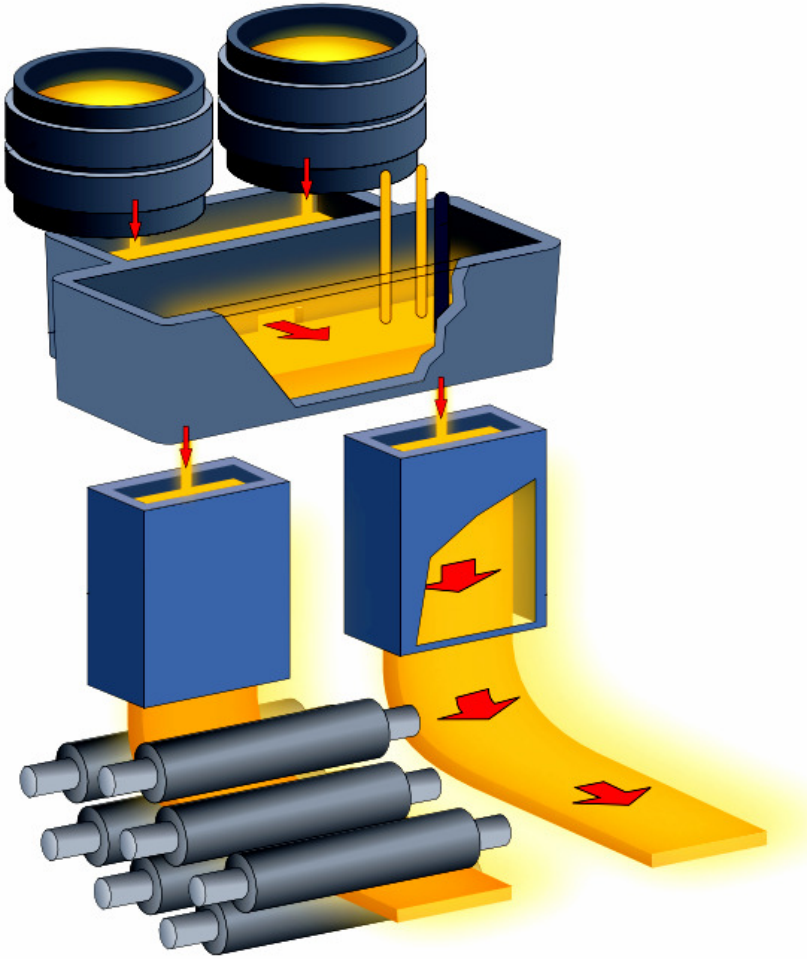
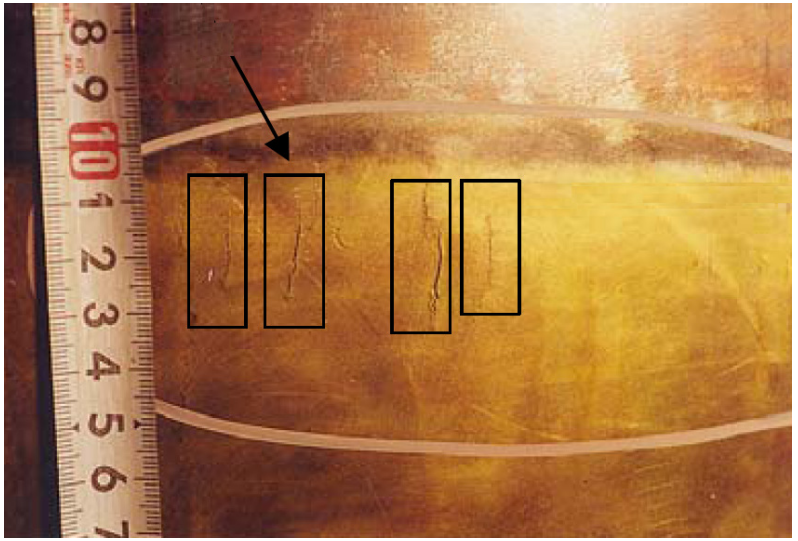
Applicazione #1





Yoon, U.-S., J.-K. Park, B.G. Thomas, and I.V. Samarasekera
85th Steelmaking Conference Proceedings, 2002.

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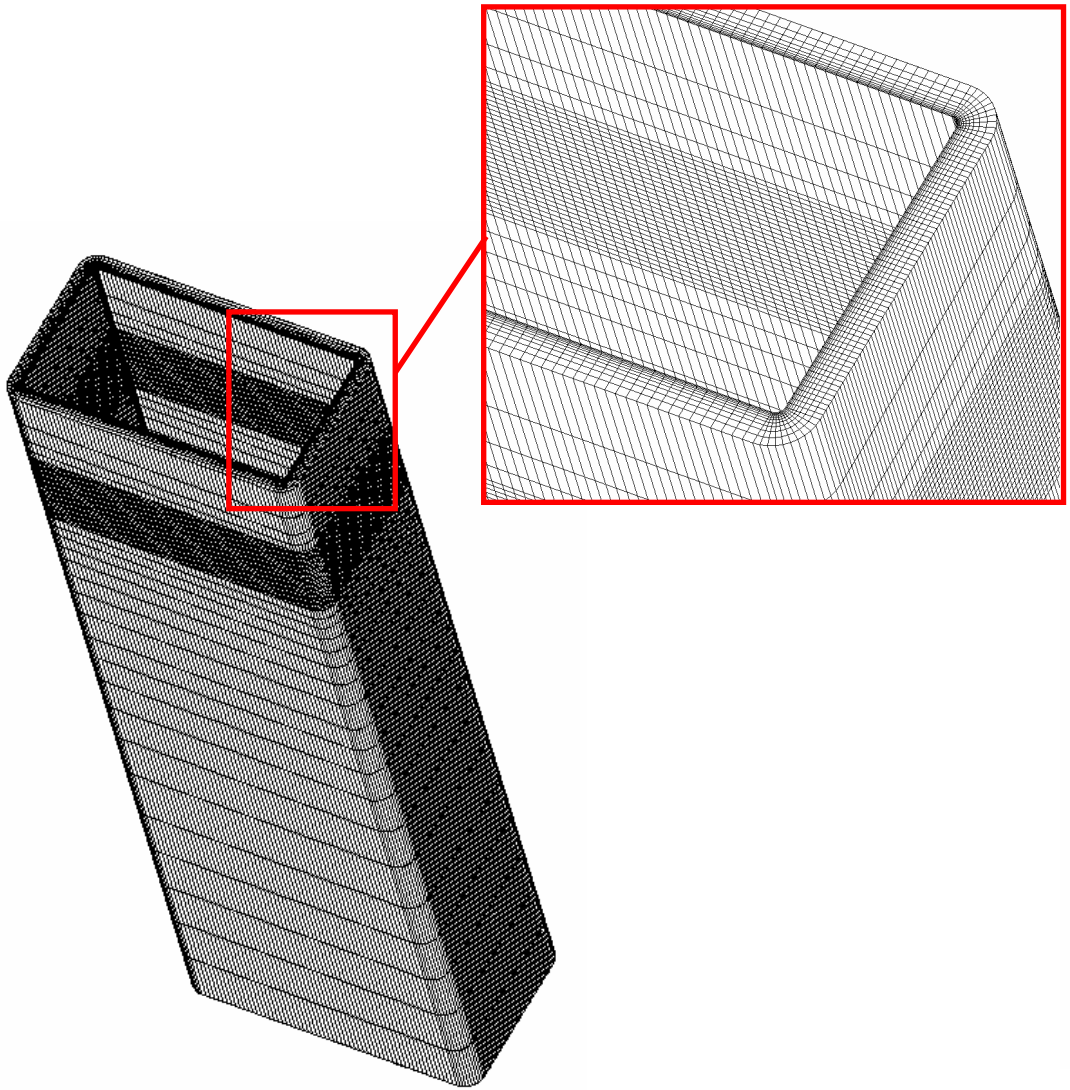
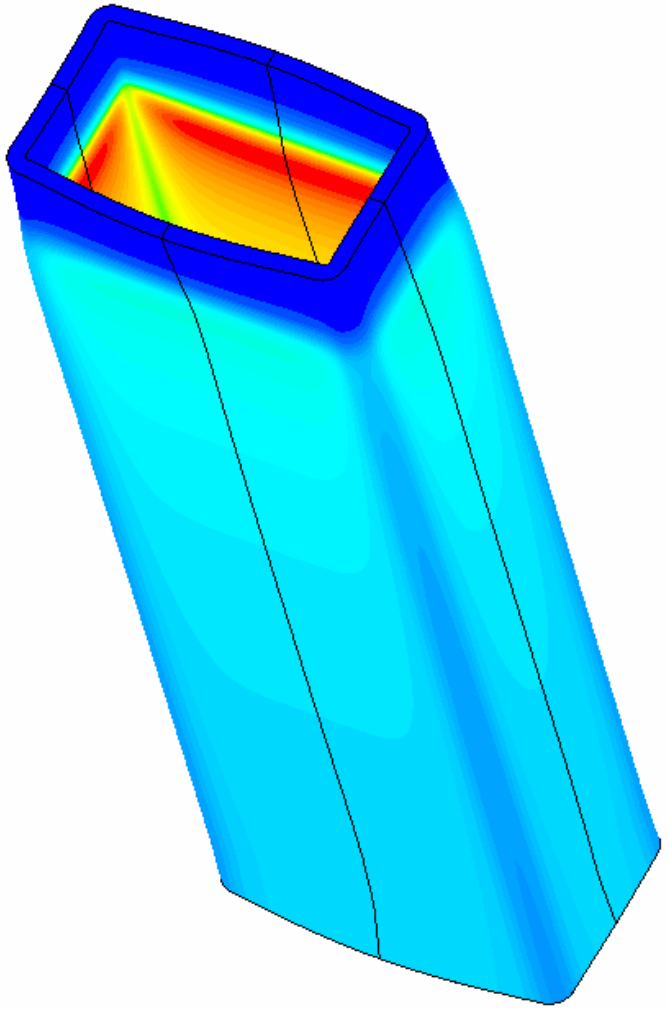
Applicazione #1





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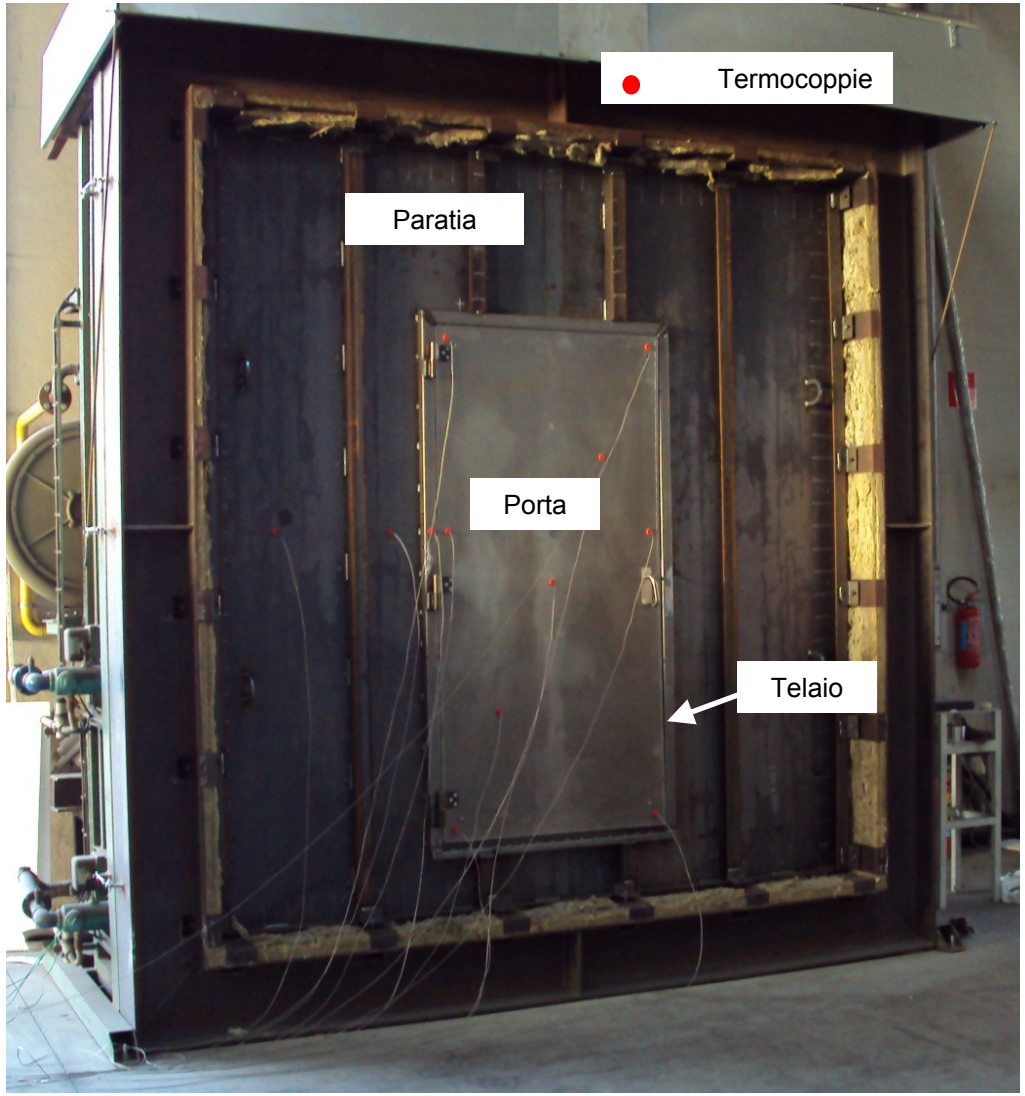
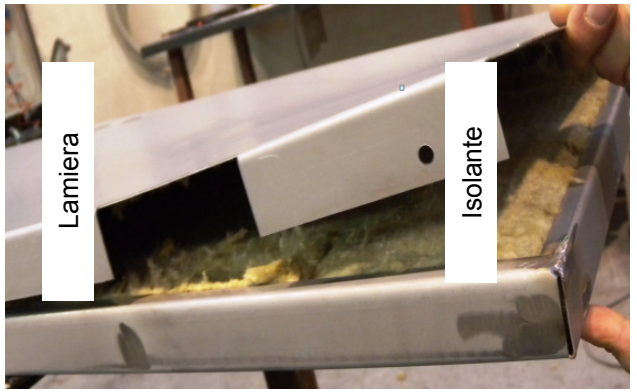
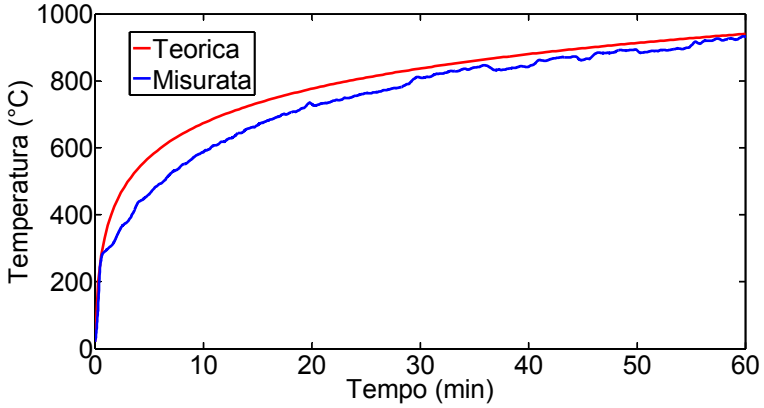
Applicazione #2







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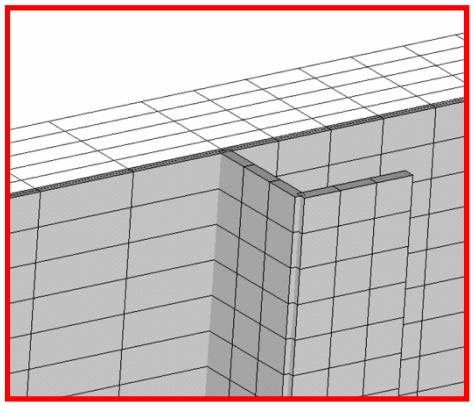
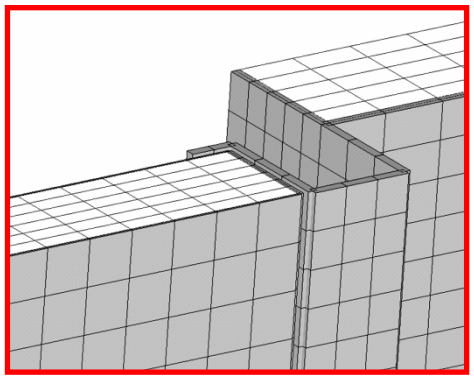
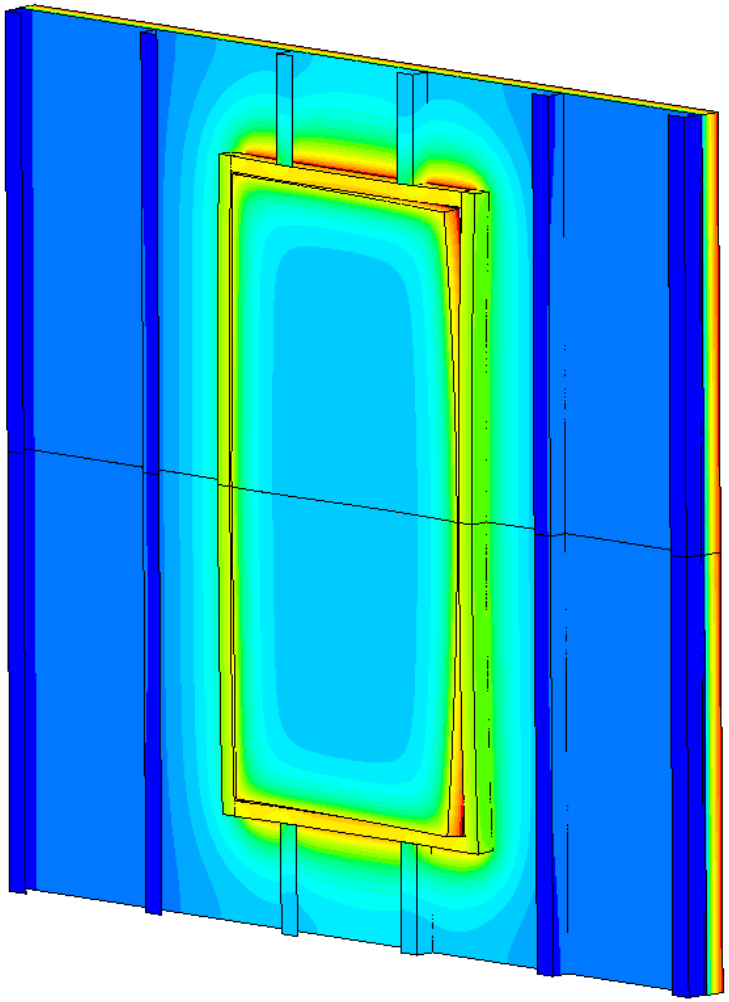
Applicazione #2







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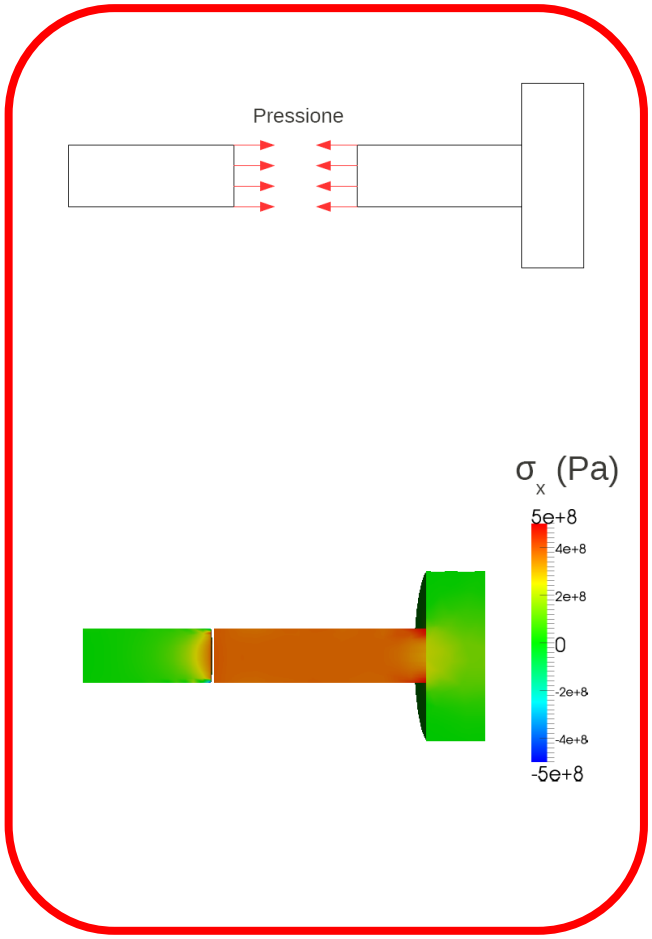
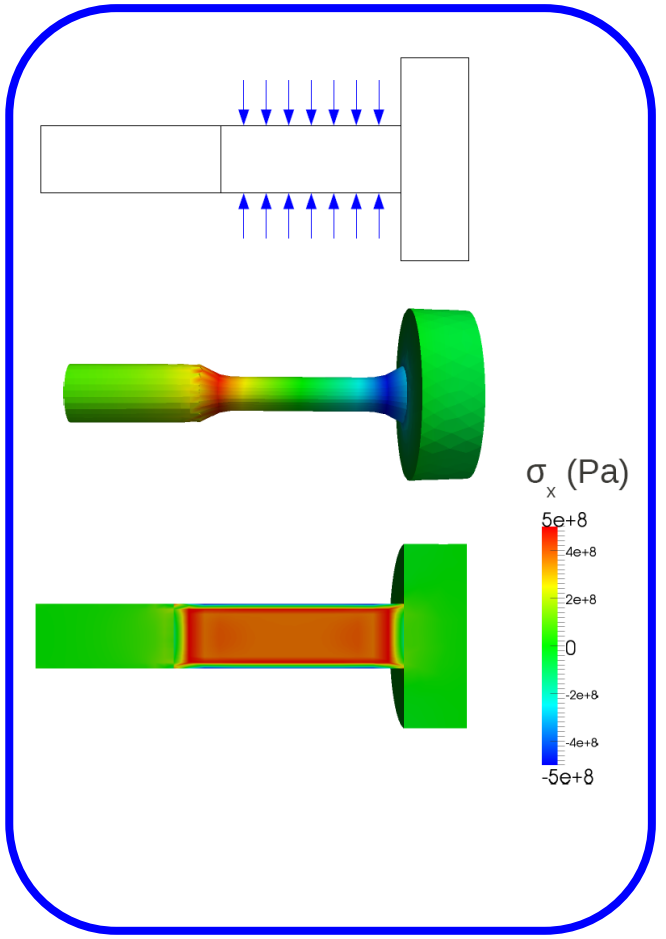
Applicazione #3





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Grazie per l’attenzione

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