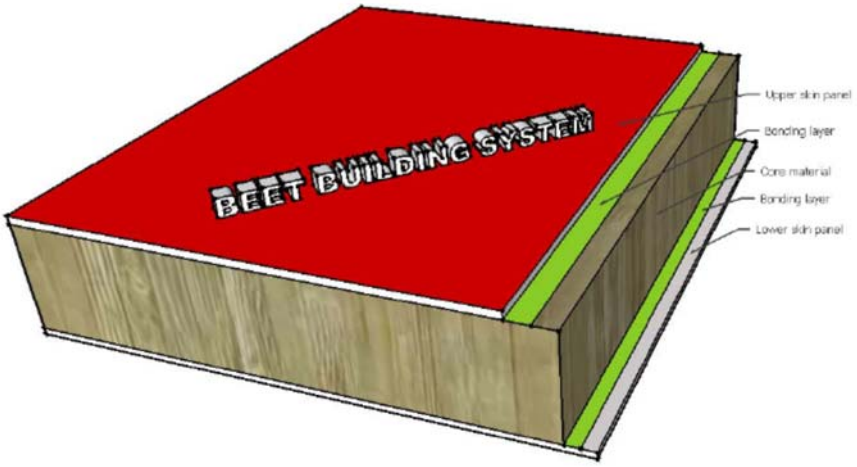
OUR SANDWICH BUILD UP.



THE TASK OF THE CORE.

In lightweight sandwich Constructions the CORE is usually relatively thick and has a much lower density compared to the skins. The primary mechanical requirement for the core layer is to prevent the movement of the skins relative to each other (in-plane and out-of-plane).

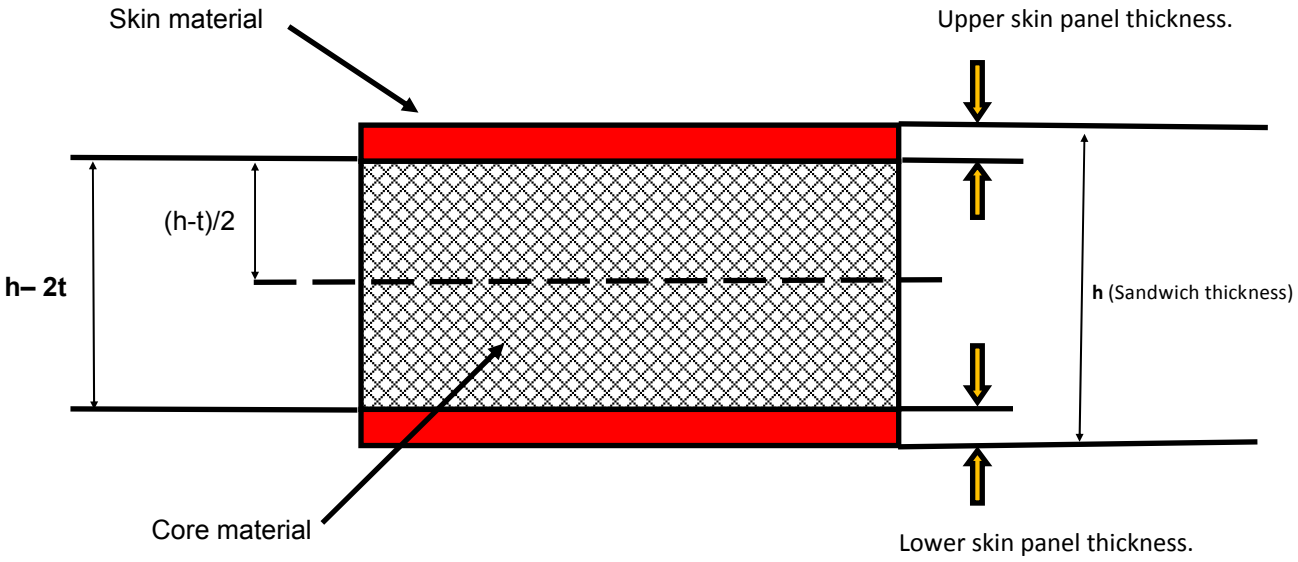
Sufficient out-of- plane compression properties of the sandwich core are required to support the skins to maintain their distance from the neutral axis, to prevent them from buckling and to restrict their deformations due to local out-of-plane loads. Furthermore, sufficient **out-of-plane** shear properties of the core are demanded to restrict in-plane displacement of the skins relative to each other due to bending moments and transverse loads. The core layer can furthermore have additional functions e.g. thermal and acoustic isolation or energy absorption during impact.

CORE MATERIAL.

We are normally using mineral wool or balsa as core material. We can also use honeycomb of aluminium, but we try to avoid using this material do to bad fire performance and bad thermal bridges.

THE TASK OF THE SKINS.

The skin layers in sandwich constructions **carry the in-plane tensile/compression stresses and in-plane shear stresses**. They are usually relatively thin and have a high stiffness and strength. In addition to high mechanical in-plane properties per weight the skin material usually has to fulfil also other requirements like low costs, high surface quality and good impact performance.



ING. JAN HOLM HANSEN AS
Tel: (+47) 916 64 854 E-mail: jan@beet.no www.beet.no
Kontor adr.: Bugårdsveien 8 B, N-3228 Sandefjord, Norway Lager: Borgeskogen 3, 3160, Stokke, Norway