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ADVANTAGES AND PROBLEMS RELATING TO THE APPLICATION OF SANDWICH STRUCTURES

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ABSTRACT

Although the various types of sandwiches mentioned above have different characteristics and issues, they share common advantages and difficulties. The following may be summed up:

Typical Benefits in Comparison with Typical Structural Materials

- High stiffness, suitable for lightweight construction.
- Good buckling resilience as compared to orthotropic slender platform constructions.
- Good qualities of crashworthiness.
- Lower building heights (as opposed to stiffened panels) for improved usable occupancy.
- Large unsupported lengths, therefore decreasing the need for support parts and enhancing flexibility of architecture.

Typical Areas of Concern

- High cost of materials.
- Complex conception/validation processes. A lengthy certification procedure may be possible.
- General lack of knowledge in sandwiches and facilities at shipyards.
- The requirement for rearrangement of process chains for assembly and equipment more cost efficient.
- Complex equipment
- Detailed modular building planning needs.

Keywords: Advantages, Problems, Application Of Sandwich Structures