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Characterisation of handling and service surface damage on Nickel alloys caused by low velocity impacts of blunt hard objects

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Highlights

- Geometrical characterisation of dent damage caused by low velocity impact of hard blunt object on Nickel superalloys at different impact velocities;
- Validation of a finite element model to predict the dent geometry and residual stresses by comparison with the experimental results;
- Residual stress measurement by laboratory sourced X-ray diffraction on dented specimens;
- Comparison between residual stresses measured experimentally with the residual stresses predicted by the finite element model.

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