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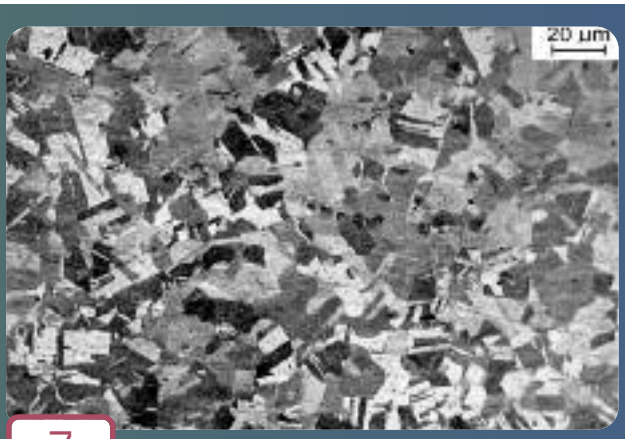

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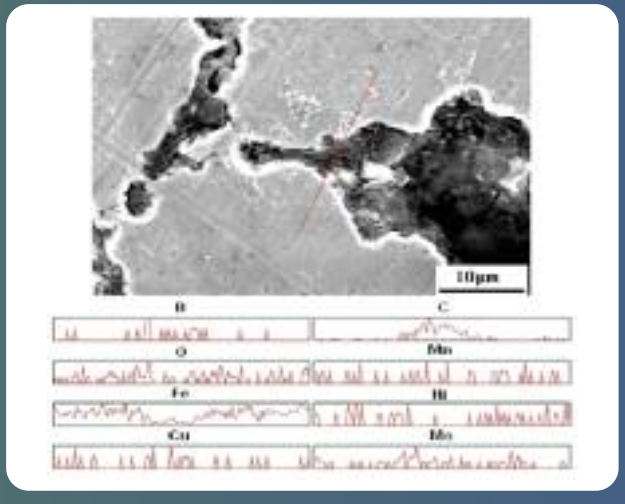
The Materials section represented by L.A. Dobrzański, A. Grajcar and W. Borek on "Hot-working behaviour of high-manganese austenitic steels" on a **page 7** presents the investigation of newly elaborated high-manganese austenitic steels with nb and ti microadditions in variable conditions of hot-working. It was found out that they have austenite microstructure with numerous annealing twins in the initial state. Continuous compression tests realised in the temperature range from 850 to 1050°C with the strain rate of $10s^{-1}$ enabled determination of yield stress values and values of ϵ_{max} deformations – corresponding to maximum flow stress. It was found out that initiation of dynamic recrystallisation requires true strain equal at least 0.29. Holding of steel after plastic deformation allowed determining the progress of recrystallisaation in the function of isothermal holding time. Determined half-times of recrystallisation at 900°C after deformation with 25% of reduction are equal 32 and 17s for 27Mn-4Si-2Al-Nb-Ti and 26Mn-3Si-3Al-Nb-Ti steel, respectively. Several-stage compression tests with true strain of 0.29 permit to use dynamic recrystallisation for shaping fine-grained microstructure of steel in the whole range of deformation temperature. Decreasing true strain to 0.23 limits the course of dynamic recrystallisation to two first deformation cycles. In two final cycles of deformation, as well as in the whole range of hot-working realised with true strain of 0.19 – dynamic recovery is the process controlling strain hardening. The obtained microstructure – hot-working conditions relationships and stress-strain curves can be useful in determination of power-force parametres of hot-rolling for sheets with fine-grained austenitic structures.



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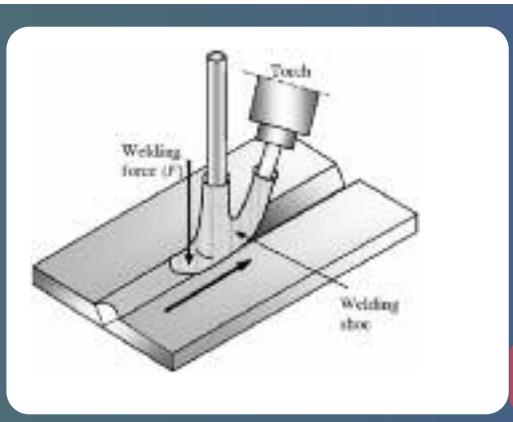
The research paper entitled "Microstructural and hardness characterisation of sintered low alloyed steel" by R. Yilmaz and M.R. Ekici on a **page 23** presents how to produce low alloy PM steel without any addition and with addition of ferro-boron addition by conventional PM manufacturing route at the different sintering temperature. The results show that increasing sintering temperature resulted in increase in hardness values; however, those values were dropped after sintering temperature higher than 1180°C. On the other hand, Boron addition contributed to hardness values at sintering temperature of 1200°C. Those values were decreased with increasing sintering temperature. The composition of the grain boundaries were affected from sintering temperature. Boron, carbon, molybdenum were seen in the grain boundaries of the specimen having the highest hardness values. It is thought that those compositions strongly effects on hardness values of the specimens.



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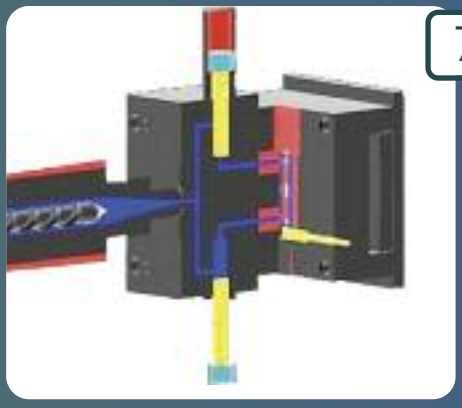
In the paper entitled "Morphological and mechanical properties of hot gas welded PE, PP and PVC sheets" by O. Balkan, H. Demirer and H. Yildirim on a **page 60** the investigation of morphological and mechanical properties of hot gas butt-welds on polyethylene (PE), polypropylene (PP), and polyvinyl chloride (PVC) sheets for four different procedures, which are single and double V-welds with and without a welding shoe is presented. Polarised light microscopy studies indicated that the heat-affected zone (HAZ) consists of welding rod core, molten zone, and deformed spherulitic zone. The results of tensile, bending, and impact tests indicated that the weld strengths of PVC sheets are lower than those of PE and PP sheets. When the welding shoe was used, weld strength increased significantly for each material due to the presence of sufficient welding pressure and the effective heating on surfaces. Morphological and mechanical properties of hot gas welded PE, PP and PVC sheet were evaluated.



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The paper entitled "Development of microstructure affected by in-mould manipulation in polymer composites and nanocomposites" by M. Bilewicz, J.C. Viana and L.A. Dobrzański on a **page 71** demonstrates the investigation of microstructure of polymer nanocomposites subjected to high shear rates during solidification phase. Obtained nanocomposites contain better mechanical properties comparing to polymer composites and application of SCORIM technique brought satisfying and improved results comparing to conventional methods. Injection moulding technique combined with specially designed mould gives possibility to manipulate solidifying polymer or polymer's mixture inside cavity mould. SCORIM technique is rarely used technology and has influence on creation and development of morphology of processed materials.

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