304-010

THE EVOLUTION OF TEXTURE AND GRAIN ORIENTATION IN AN EXPERIMENTAL 26Cr-6Mo-6Ni STAINLESS STEEL DURING COLD AND HOT ROLLING

Masoumi, M.(1); Reis, F.E.U.(1); Castro, M.O.(1); Herculano, L.F.G.(1); De Abreu, H.F.G.(1);
Universidade federal do Ceará(1); Universidade federal do Ceará(2); Universidade federal do Ceará(3); Universidade federal do Ceará(4); Universidade federal do Ceará(5);

The texture evolutions in 26Cr-6Mo-6Ni stainless steels are affected by two mechanisms, plastic deformation and martensitic phase transformation. In this work, the texture evolutions during hot and cold rolling was investigated as a function of thickness reduction in an experimental 26Cr-6Mo-6Ni stainless steel to describe the phase transformation and crystallographic orientation changes for a better understanding of the interaction between the phase transformation and deformation texture. The martensite showed the dominant {100}//ND and {110}//ND planes grain parallel to normal direction. The dominance of the {100}//ND components were ascribed mainly to martensitic transformation. Also, the internal grain structure becomes more inhomogeneous with the dislocation piles up and preventing dislocation movements.