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SEM/ DRX / EBSD charaterization of electricsubmerged arc welded of an industrial mow carbonsteel

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Abstract : In this study, we tried to understand the impact ofevolution of thermal deformation during the electric submergedarc welding process used to assembling parts. This weldingprocess is applied on an industrial low carbon steel of %C 0.19Wt, %Si 0.25 Wt, %Mn 0.40 Wt, %P 0.025 Wt, %S 0.015 Wt, %Al 0.09 Wt, %Mo 0.009 Wt, %Nb 0.05 Wt and % Ti 0.03 Wt.The plates with thickness of 2.6 mm, it is called BS2. And used bythe company SNS BAG destined for making gas storagecylinders.To highlight the present work, different areas of our specimenswere investigated especially fusion zone and heat affected zone.Characterizations performed are SEM, DRX and EBSD andshow the appearance and texture development during the weldprocess. Note that in this working part, the behavior of thermal

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