Textures of a Few Multi-Phase Advanced high Strength Steels

Basudev Bhattacharya∗1, Santigopal Samanta1, Ravi Ranjan1, Sarbari Ganguly1, Akula Durga Vara Prasad1, and Bhagyaraj Jayabalan1

1RD, Tata Steel Limited – India

Abstract

Advanced high strength steels (AHSS) are the key materials for the manufacturing of present and future generation automobile body components. The present paper is a part of a comprehensive study on a series of multi-phase steels, the microstructures being consisted mainly of ferrite, bainite and martensite. The study concentrates primarily on the texture development in a few hot rolled and cold rolled multi-phase steels, with variations in processing. The paper mainly aims at understanding the nature of texture in this kind of steels, through the analyses of bulk texture using X-ray diffraction, as well as micro-texture using EBSD.

Keywords: AHSS, hot rolling, cold rolling, bulk texture: micro, texture