마그네슘 압연판재를 이용한 용접 튜브 제조 기술 개발

Development of magnesium tube manufacturing technology with strip cast and warm rolled AZ31 sheet.

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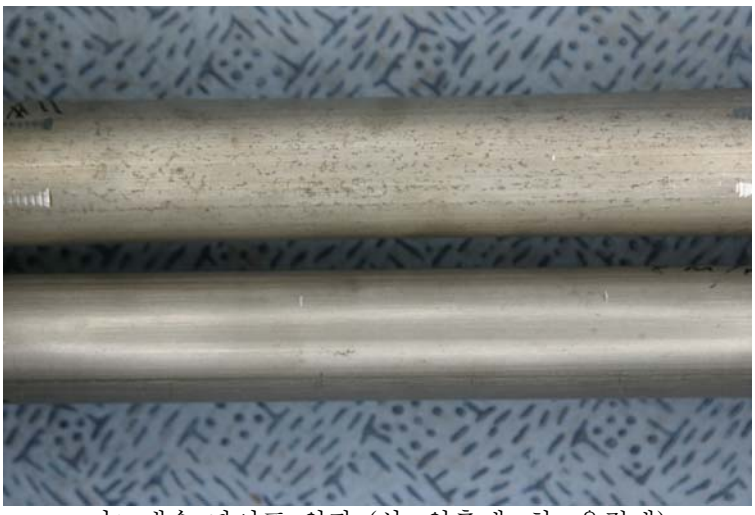
Abstract

Magnesium alloy is being used for structural material since it has high specific strength. Tubular shape was effective way for enhanced structural design. To manufacture the tube, it is necessary to weld the butted joint of both tubular formed sides. But the magnesium alloy was hardly welded with conventional welding processes. The laser welding was effective way to joint magnesium alloys because it had high weld strength and productivity compare with other welding processes. In this study, magnesium alloy sheets was formed at elevated temperature to tubular shape and welded with laser. Consequently, the magnesium alloy tube was making successful with warm forming and laser welding and bicycle frame was making with it.

Key words; magnesium sheet, tube, warm forming, laser welding



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