

**EXPERIMENTAL COLD COMPRESSION OF ALUMINUM 6061 CHIPS FROM DIFFERENT LUBRICANT
CONDITION**

Mohamad Syahmi Shahrom^{1, a}, Ahmad Razlan Yusoff¹

¹Faculty of Manufacturing Engineering, University Malaysia Pahang, 26600 Pekan, Pahang,
Malaysia

^asyahmi0208@gmail.com

Keywords :Aluminum 6061 chips, Machining Operation, Flood Machining, Dry Machining,
Compression process.

Abstract. Direct Recycling process of aluminum chips and scraps is a relatively novel eco-friendly solution to minimize cost processing issue. To get a high quality product for direct recycling method, several factors had been consider during processing. This paper investigates the effect of AL 6061 chips from different lubricant condition during compression process. Billet Aluminum 6061 were machining using on lathe machine with constant machine parameters. Two types of lubricant condition were used during machining process is dry and flood condition. Afterwards, chips were cold compression in closed die, by punch and die 30mm diameter. The final result show the better relative density and porosity for flood machining condition. For the consolidation result, it show the dry billet better than flood billet.