

## ABSTRACT

*Tailing is a solid material produced through the separation process of valuable minerals in mining activities. Material produced in the form of fine sand and mud, or tailing, is often an environmental problem when not properly managed and can pollute the surrounding environment. Therefore, the aim of this study is to know the strength of the optimal pressure and tailing characteristics of manganese as a fine aggregate additive in the production of concrete at percentages of 0%, 2%, 4%, 5%, and 6%. Planning of concrete mixtures using the method SNI-03-2834-2000. The study was an experimental study using a cylinder test object with a height of 30 cm and a diameter of 15 cm with a number of test objects of 3 pieces each variation, and a strong pressure plan of 20 MPa. Strong pressure testing is carried out at 7, 14, 21, and 28 days of concrete life. The results of this study showed that strong pressure of normal concrete obtained 23.76 MPa, and strong pressure of Mn 2% concrete was obtainable 30.36 MPa, strong concrete pressure of Mn 4% obtainable, 25.27 MPa, strong beton pressure of Mn 5% obtainable 24.7 MPa and strong pressure Mn 6% obtainability 21.49 MPa. This research can conclude that the use of manganese tailing as an additional ingredient is influential against strong concrete pressures. The most optimal concrete pressure strength is obtained with a 2% Mn mixture that is stronger than the pressure of normal concrete. The increase in tailing percentage is very influential, the more material added, the stronger the pressure will decrease.*

**Keywords:** *Concrete, Strong Pressure, Tailings Manganese.*