

# TRAINING AND SUPERVISION TO DEVELOP FACILITIES FOR ALUMINIUM CASTING PRACTICE AT SMK MUHAMMADIYAH 1 BANTUL

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## ABSTRACT

Metal Casting is one of the expertise competencies that must be possessed by graduates of Mechanical Engineering Study Program. This is stated in the Decree of the Director General of Secondary Education of the Ministry of Education and Culture number: number / 06 / D.DD5 / KK / 2018 dated June 7, 2018 regarding the Vocational Secondary Education Skills Spectrum. SMK Muhammadiyah 1 Bantul has not provided casting practice to the students because have no facilities to held casting practice. Teachers and technicians also have no mastered in the metal casting process.

The aluminum casting practice facilities weres developed by Teachers, technicians, and students at SMK Muhammadiyah 1 Bantul with training and mentoring methods. The steps as follows: (1) Division of work teams and supervisor; (2) Identification and preparation of work plans; (3) Preparation of materials and tools; (4) Making facilities for casting practices, covering: Aluminum crucible furnace, a set of equipment to make sand molding, and a set of equipment for procces of smelting and pouring; (5) Testing of aluminum crucible furnace; (6) Prepare patterns and materials for training; (7) Training implementation; (8) Evaluation. The activities are conducted in the form of training which includes class activities, activities to make facilities with drawings, and practice casting practices.

The targets that have been successfully achieved are: (1) Teachers and technicians of the at SMK Muhammadiyah 1 Bantul have been able to develop facilities for casting practice; (2) Tools for casting practices include crucible furnaces, sand mold making devices, and pouring devices; (3) Teachers and technicians have been able to operate and maintain aluminum melting furnaces; (4) Teachers and technicians have been able to make sand molds and perform the casting process.

Kata Kunci: *Training dan supervision, develop, practice facilities, casting*