

COVID-19 Update at DOST-ITDI

DOST-ITDI helps fight COVID-19 with 3D printed face shields

As the number of COVID-19 cases continued to rise, Filipino health workers fighting the pandemic are finding themselves in a short supply of personal protective equipment. Among these is the medical face shield used by doctors and nurses when attending to patients with infectious diseases.

In response to this national emergency, the DOST-ITDI Director Dr. Annabelle V. Briones, through MATDEV Team Leader and Chief of the Materials Science Division (MSD-ITDI) Dr. Blessie A. Basilia, produced 3D printed face shield holders based on Fused Deposition Modeling (FDM) Technology. This technique enables the fabrication of optimized face shield digital design using thermoplastic filaments.

The MATDEV or the Development of Multiple Materials Platform for Additive Manufacturing Project Team undertakes research and development of materials for use in additive manufacturing. They aim to reduce the cost of filaments and other materials for 3D printing by utilizing our local resources.



MATDEV is one of the two projects under the Advanced Additive Manufacturing R & D Program, jointly undertaken by ITDI and the Metals Industry Research and Development Center (DOST-MIRDC) to establish the AMCen (Advanced Manufacturing Center) of

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DOST. The second project is the RAPPID-ADMATEC (Research on Advanced Prototyping for Product Innovation and Development using Additive Manufacturing Technologies) of MIRDC.



This is the first time, however, that the team used their various FDM 3D printers of this new facility to support efforts on national public health concern. Working on a 24-hour shift starting March 26, 2020, the team delivered the assembled ready-to-use face shields to the frontliners of the Philippine Heart Center on March 30, 2020, through Dr. John Yam. Continuous effort are currently being done at the AMCent-

MATDEV facility to produce more face shields for the Filipino health workers.

The team also donated thermoplastic filaments and transparent films for the 3D printing project of the Philippine Science High School (DOST-PSHS). PSHS Director, Dr. Lawrence V. Madriaga, received the filaments and films which will be used to 3D print more face shields.



Truly, through collaboration, innovative thinking, and application of research and development, the science community can serve the people, help save lives, and impact change. (AMGuevarra\ ITDI S&T Media Service)

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