

**AMDMM-2019**

**Conference  
Proceedings**

**Volume - 7  
Issue - 3**

**Advancements in  
Materials, Design and  
Manufacturing Methods**

**IJERT**

**Organized by**

**National Institute  
of Technology,  
Rourkela-769 008, Odisha,  
Department of  
Mechanical Engineering**

**Published By**

**International Journal of  
Engineering Research  
and Technology  
([www.ijert.org](http://www.ijert.org))**