

Title	イノベーションの普及プロセスにおける社会システムの構造が及ぼす影響 — 金属AM(Additive Manufacturing)技術における事例研究 —
Author(s)	辻, 大輔
Citation	
Issue Date	2021-09
Type	Thesis or Dissertation
Text version	author
URL	http://hdl.handle.net/10119/17510
Rights	
Description	Supervisor: 内平 直志, 先端科学技術研究科, 修士(知識科学)

Abstract

A study on the effects of social system's structure in the diffusion of innovation

– Case study on metal additive manufacturing technologies –

1930406 TSUJI Daisuke

Keyword: *Additive Manufacturing, 3D printing, Innovation, Diffusion, Social system*

There are high expectations for metal AM (Additive Manufacturing) in the industrial world. AM is regarded as one of the key innovations in the Industries 4.0 to achieve high value-added products and services. In order to diffuse this innovation, it is necessary to discuss not only the technological issues but also discuss the issues about diffusion of innovation to social system. However, social systems have been discussed from a macro perspective that can be seen as an one group, there is a lack of discussion about the effects of the internal structure of social systems. Thus, there is a lack of research on how the structure of social systems affects the diffusion of innovation.

The purpose of this paper is to survey the issues pertaining to diffusion of metal AM technologies, especially discusses the relationship between the structure of social systems of shaped raw material industry and features of metal AM. This study applies a journal survey and qualitative analysis by interview with 6 AM experts.

This paper shows that the uneven distribution of knowledge and know-how built by existing technologies in the social systems affects the diffusion of innovation.