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THE USAGE OF WATER AND WASTEWATER SLUDGE
AS ABRICK

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by

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ABSTRACT

Sludge is known as waste material or dewatered solid from a commercial or industrial wastewater treatment plant and potable water treatment plants. It consists of clay, microorganisms and chemicals generated from the use of coagulant material. The study of sludge is based on alum coagulant which was carried out at the sedimentation tanks of Perbadanan Bekalan Air (PBA) and Indah Water Konsortium (IWK). The objectives of the study were reused water and wastewater sludge as a mortar brick and to determine the properties of sludge as a mortar brick material for construction compare to normal brick. In order to meet these objectives, several tests were done in the material laboratory such as sieve analysis, water absorption and the compression strength test. The result from this study indicates that the 10%, 20%, 30%, 40% and 50% sludge added did not passed the compressive strength requirements 6.9 N/mm^2 . Furthermore, the 10%, 20%, 30% , 40% and 50% sludge added also did not passed the minimum percent of water absorption requirements 8%.It was concluded that the usage of sludge from water and wastewater treatment plant is not suitable material for construction.

TABLE OF CONTENTS

CONTENT	PAGE
Acknowledgement	i
Table of Contents	ii
List of Tables	vi
List of Figures	viii
List of Abbreviation	x
Abstract	xi

CHAPTER

1	INTRODUCTION	1
1.1	Background	1
1.2	Problem Statement	2
1.3	Objectives	2
1.4	Significant of this study	3
1.5	Scope of the study	3
2	LITERATURE REVIEW	
2.1	Introduction	4
2.2	Definition of Sludge	4
2.3	Water Treatment Sludge	5
	2.3.1 Filter Backwash Water Sludge	7