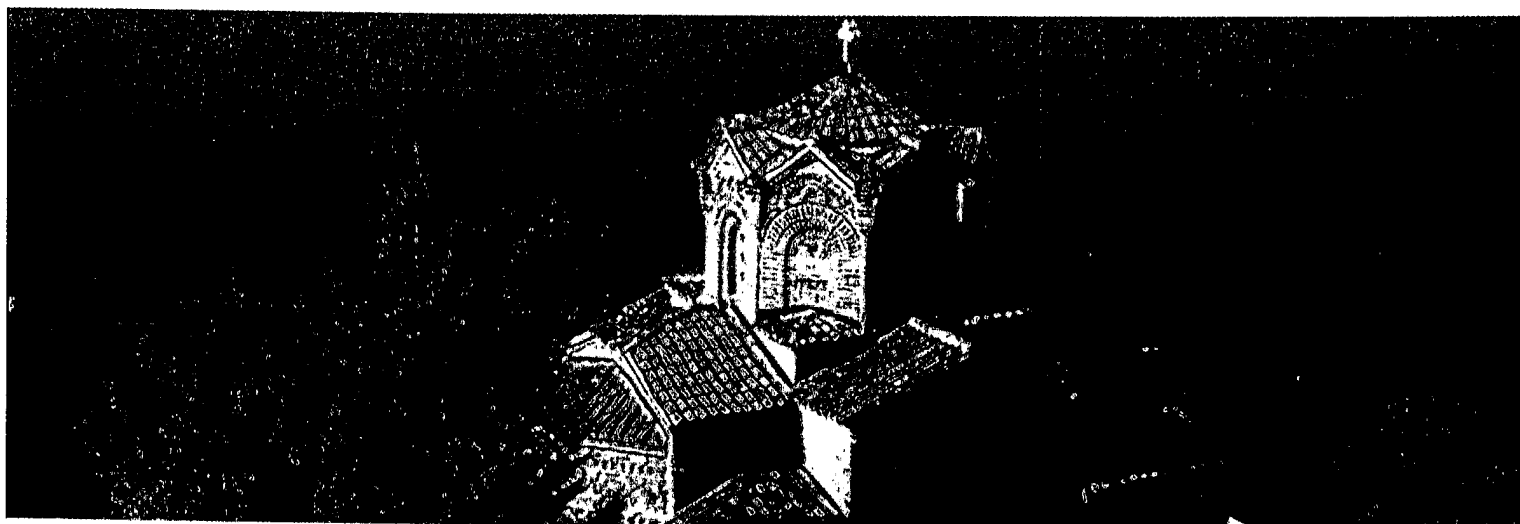




MACEDONIAN UNION OF METALLURGISTS



**VIIth INTERNATIONAL
METALLURGICAL CONGRESS**
METALLURGY, MATERIALS, ENVIROMENTAL (MME)

BOOK OF ABSTRACTS

**09.06 - 12.06. 2016
OHRID, MACEDONIA**



MACEDONIAN UNION OF METALLURGISTS

VIIth International Metallurgical Congress,
**METALLURGY, MATERIALS
AND ENVIRONMENT**

09th – 12st June 2016

Ohrid, Republic of Macedonia

BOOK OF ABSTRACTS

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Sveto Cvetkovski & Goran Načevski

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NAM - 3

GLASS FABRICS AS REINFORCEMENT FOR COMPOSITE PLATES

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The aim of this study was to investigate the possibilities of utilization of the different glass fabrics and matrices for production of the composite plates. The thermoplastic and thermosetting matrices were used for production of the prepreg from the fabrics. The reinforcement material was impregnated with matrix to perform a prepreg and with this process a complete wetting of fibers with the matrix. Basic parameters of the process for prepreg production like as content of matrix, uniformity of matrix along overall surface of reinforcement, gel time, matrix flow, moisture content and volatiles materials were tested.

The composite plates were fabricated from the prepreg materials by thermo-compression in an open mold on a semi-industrial press machine. The basic mechanical and physical properties of the composite plates were investigated. The laminated composite structures have wide application in aerospace, mechanical, civil and other areas of engineering chiefly due to the low value of specific weight and high values of specific strength and specific stiffness.

Key words glass fabrics, impregnation, prepreg, composite plate.