

STRUCTURE PLANNING OF THE BRIDGE PEMATANG DUKU TIMUR VILLAGE – KETAM PUTIH VILLAGE USING COMPOSITE STRUCTURE

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ABSTRACK

A bridge is a construction structure that allows connecting a transportation route separated by obstacles such as rivers, valleys, irrigation channels and even connecting islands that are quite far apart., the bridge connecting Pematang Duku Timur Village with Ketam Putih Village is in a damaged condition so that four-wheeled vehicles have to pass another alternative. The bridge is no longer feasible to cross because the upper structure has slacked, is very if it is forced to be passed by vehicles continuously and it will cause more severe damage. For this reason, a new bridge using a composite structure was planned.

In this thesis, it is planned this bridge using a composite structure between steel girders and concrete slabs. This planning refers to SNI T-12-2004, SNI T-03-2005, SNI 1725:2016 and SNI 2833:2016. As for what is being planned is the girder, diaphragm, slab, sidewalk and bridge support posts.

From the result of the planning, the steel girder profile is using WF 800 x 300 x 14 x 26, with a gap between 1,120 m. The steel angles profile diaphragm 400 x 400 x 13 x 21 mm using with a gap 4 m diaphragm, the elastomeric placement diameter is 350 x 300 x 36 mm.

Keyword : composite bridge, planning, upper structure