KAWASAKI STEEL GIHO
Vol.17 (1985) No.2

Structural Characteristics and Application of Kawasaki Composite Slab Bridges

(Keinosuke Hamada) (Tomoo Kasuga)
(Masakatsu Sato) (Sachito Tanaka)

:
T

Synopsis :
Composite slab bridge has newly been developed as a simple support highway bridge. It consists of deformed-flange T-shapes, bottom steel plates and expansive concrete. The depth of this bridge is much smaller than those of conventional bridges. Moreover, since the steel plates act as concrete form, erection work is very simple, rapid and safe. The structural characteristics and fatigue strength of this slab bridge has been clear by a static bending rupture test and high-cycle fatigue test respectively. As the result of the tests, the design method has been justified and design in general is offered. Demand for this slab bridge increases every year as bridges accompanying river improvement and railway overbridges.

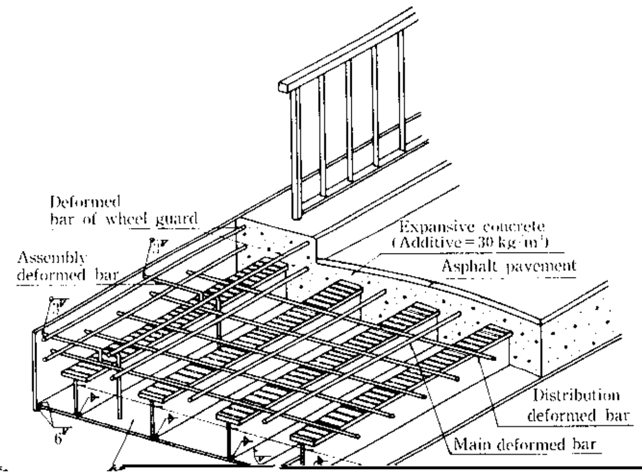
新形式合成床版橋の構造特性と適用*

川崎製鉄技報
18 (1986) 1, 75-81

Structural Characteristics and Application of
[illegible]

要旨

[illegible]



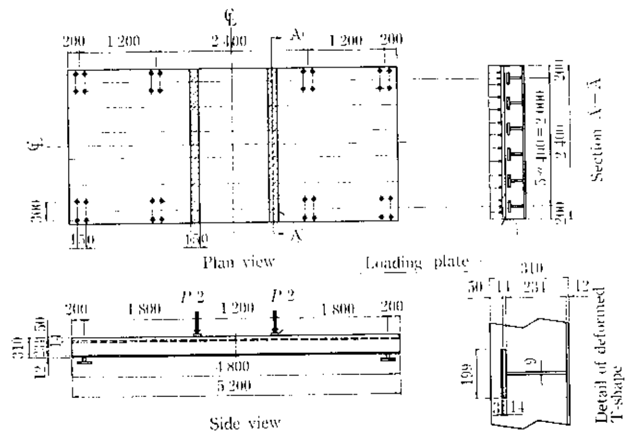
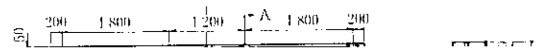
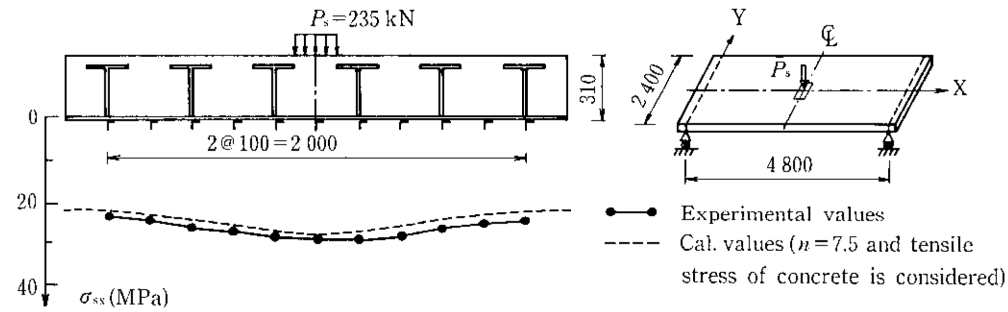


Fig. 1 Schema of composite slab bridge using deformed flange T-shape





[redacted]

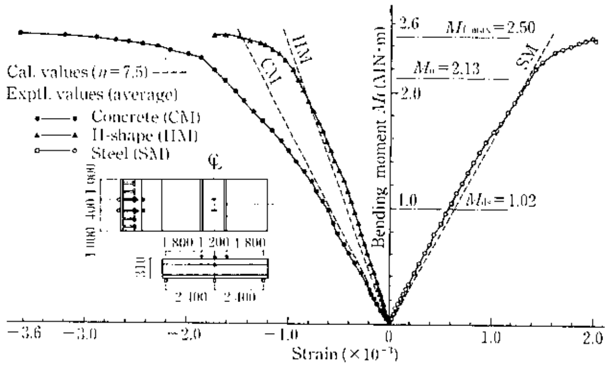
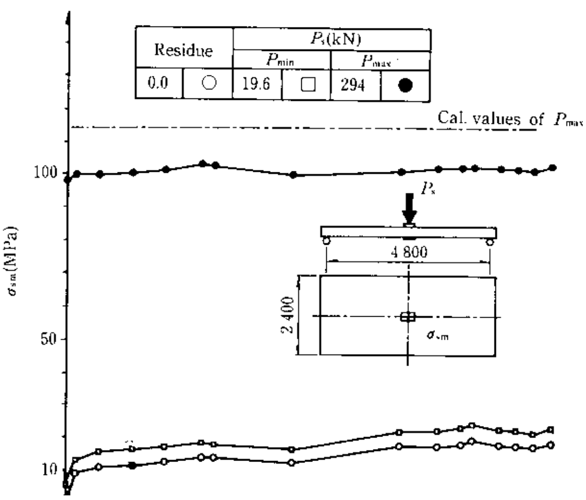


Fig. 6　Moment-strain curves at midspan section of composite slab on static test



[redacted]

と求められる。

ここで，

B: 主桁 (DFT) の間隔 (cm)

A_s: 鋼桁部の断面積 (cm²)

(cm)

n: 鋼とコンクリートに対する弾性係数比

4.2.2 X_p および M_u の算定

X_p は次式の軸方向における力の釣り合いから求めることができ，

$$\sum A_i \cdot \sigma_i = 0 \quad \cdots\cdots (7)$$

$$M_u = \sum A_i \cdot \sigma_i \cdot x_i \quad \cdots\cdots (8)$$

ここで，x_i は中立軸から各部材断面積 A_i の重心位置までの距離で

(4) 主桁断面の決定

断面応力計算は、道路橋示方書 II[7] の 9 章に基づいて計算す

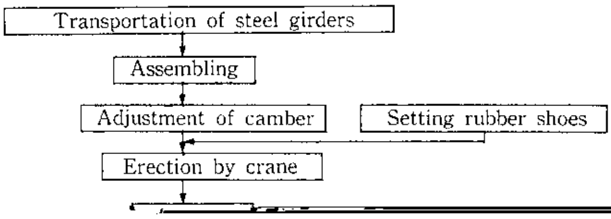

Transportation of steel girders
Assembling
Adjustment of camber
Setting rubber shoes
Erection by crane

Table 1 Erection of composite slab bridges

Bridge Name	Location	Loads*	Bridge length (m)	Width (m)	Skew angle	Slab depth (cm)	Span/depth ratio	Erection year	Remark
Top Slab of Tunnel	[illegible]	[illegible]	17.500	[illegible]	[illegible]				