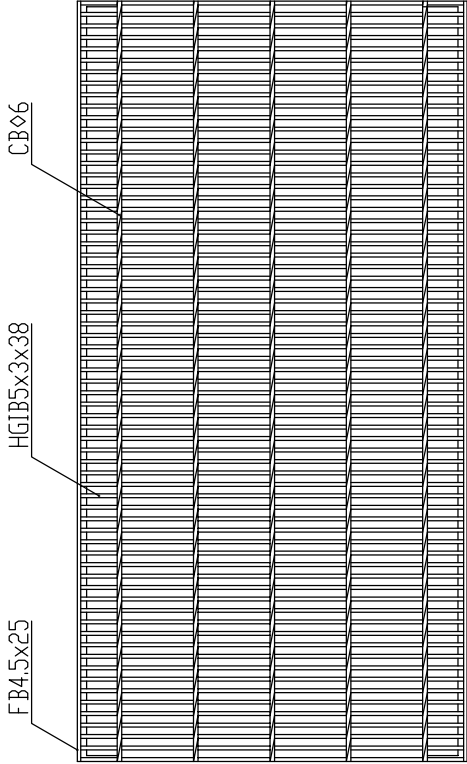
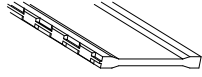
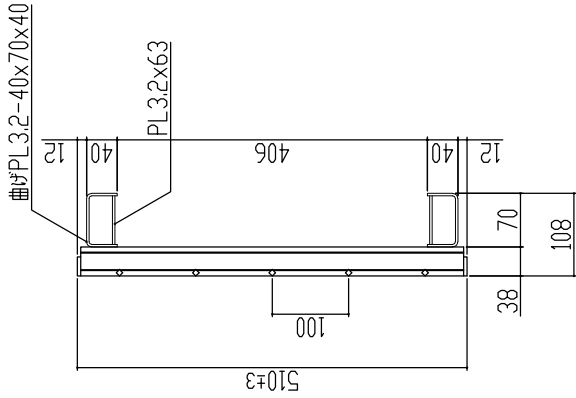
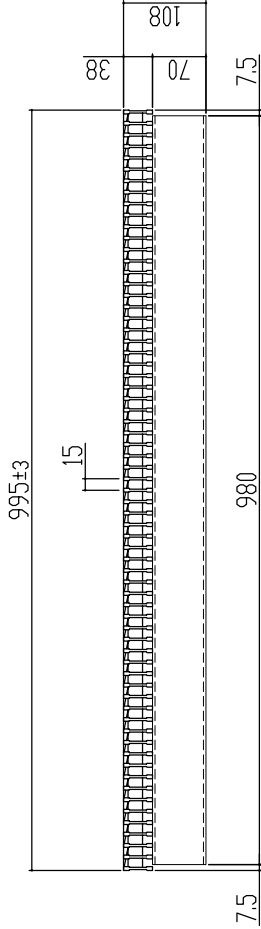




車両進行方向(側溝)



本体重量 51.9kg

主部材詳細図 表面処理 本体は溶融亜鉛メッキ仕上げ (JIS H8641)

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|  | 訂正年月日 | 訂正番 | 訂正年月日 | 訂正事項 | 訂正者 | 承認印 | 承認印 | 検印 | 製図 | 図面名称 | 図番             |
|  |       |     |       |      |     |     |     | 平元 | 山口 | 松本   | LNHJK110-385-4 |
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# グレーチング強度計算書



|             |      |                           |
|-------------|------|---------------------------|
| 1<br>仕<br>様 | 品 名  | LNHJK110-385-4            |
|             | 製品寸法 | 510x995x38+70             |
|             | 主部材  | I - 5 × 3 × 38            |
|             | 断面係数 | Z = 1.111 cm <sup>3</sup> |

|                       |        |                                    |        |           |
|-----------------------|--------|------------------------------------|--------|-----------|
| 2<br>設<br>計<br>条<br>件 | 荷重条件   | T-25                               | 支点間距離  | L = 406   |
|                       | 後輪一輪荷重 | P = 100000 N                       | 衝撃係数   | i = 0     |
|                       | 許容応力   | $\sigma_b = 320$ N/mm <sup>2</sup> | 車両進行方向 | 主部材に対し、縦断 |
|                       | 主部材ピッチ | O = 15 mm                          |        |           |
|                       | 接地面積   | a mm × b mm = 200 mm × 500 mm      |        |           |

1. ベアリングバー1本当たりの単位荷重:  $\omega$  (N/mm)を求める。

$$\omega = \text{後輪1車荷重} \times (1 + \text{衝撃係数}) \times \text{ピッチ} / \text{接地面積} \quad \text{より}$$

$$\omega = 100000 \times (1 + 0) \times 15 / 100000$$

$$\omega = 15.00 \text{ (N/mm)}$$

2. ベアリングバーの最大曲げモーメント:  $M$  (N・mm)を求める。

$$M = \omega \times L \times L / 8 \quad \text{より}$$

$$M = 309067.5$$

$$M = 309,068 \text{ (N・mm)}$$

3. 曲げ応力度:  $\sigma_b$  (N/mm<sup>2</sup>) を求める。

$$\sigma_b = M / Z \quad \text{より}$$

$$\sigma_b = 309,067.5 / 1111.000$$

$$\sigma_b = 278.19 \text{ (N/mm}^2\text{)}$$

従って、許容応力  $\sigma_b = 320$  (N/mm<sup>2</sup>) に対し、

$$\underline{\underline{278.19 \text{ (N/mm}^2\text{)} \leq 320 \text{ (N/mm}^2\text{)}}}$$

3  
強  
度  
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|             |                                                |
|-------------|------------------------------------------------|
| 4<br>総<br>括 | 上記の計算式により、1項目の仕様で、<br>2項目の設計条件に対し十分な強度を保持致します。 |
|-------------|------------------------------------------------|