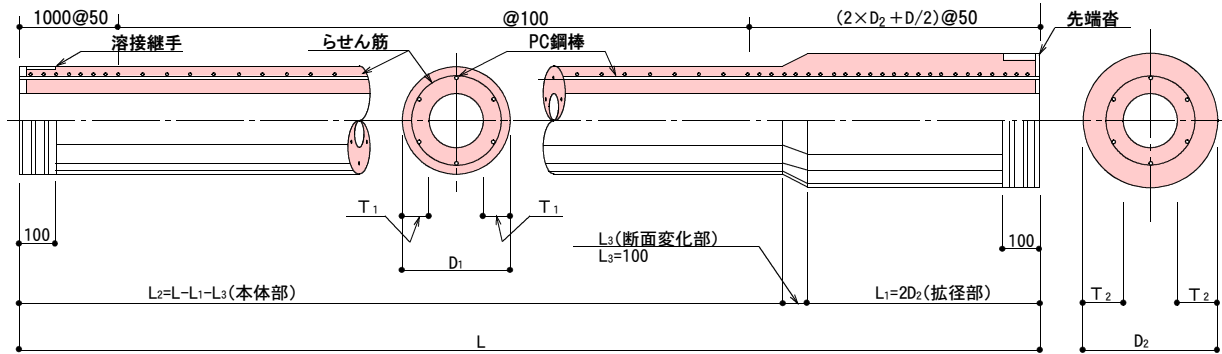


MANAC ST105 PILE

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ST105 PILE

標準構造図



マナック S T パイル標準規格表

| 呼び名 | 本体部 外径 D1 (mm) | 拡径部 外径 D2 (mm) | 種 類 | 厚 さ | | 拡径部 長 さ L1 (mm) | テーパ部 | | 杭長 (m) |
|--------|-------------------------|-------------------------|--------|------------|------------|--------------------------|-----------|-----------|-----------|
| | | | | T1 (mm) | T2 (mm) | | a (mm) | b (mm) | |
| 3035 | 300 | 350 | A | 60 | 85 | 700 | 25 | 100 | 5~13 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 3040 | 300 | 400 | A | 60 | 110 | 800 | 50 | 100 | 5~13 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 3540 | 350 | 400 | A | 60 | 85 | 800 | 25 | 100 | 5~13 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 3545 | 350 | 450 | A | 60 | 110 | 900 | 50 | 100 | 5~13 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 4045 | 400 | 450 | A | 65 | 90 | 900 | 25 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 4050 | 400 | 500 | A | 65 | 115 | 1000 | 50 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 4550 | 450 | 500 | A | 70 | 95 | 1000 | 25 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 4555 | 450 | 550 | A | 70 | 120 | 1100 | 50 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 5060 | 500 | 600 | A | 80 | 130 | 1200 | 50 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 6070 | 600 | 700 | A | 90 | 140 | 1400 | 50 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 7080 | 700 | 800 | A | 100 | 150 | 1600 | 50 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 8090 | 800 | 900 | A | 110 | 160 | 1800 | 50 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 80100 | 800 | 1000 | A | 110 | 210 | 2000 | 100 | 200 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 90100 | 900 | 1000 | A | 120 | 170 | 2000 | 50 | 100 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 90110 | 900 | 1100 | A | 120 | 220 | 2200 | 100 | 200 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |
| 100120 | 1000 | 1200 | A | 130 | 230 | 2400 | 100 | 200 | 5~15 |
| | | | B | | | | | | 5~15 |
| | | | C | | | | | | 5~15 |

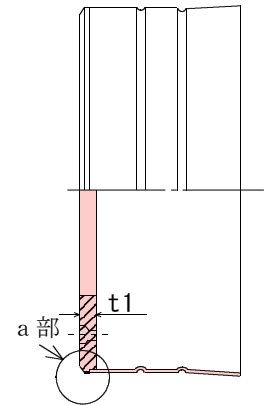
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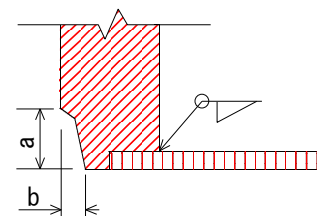
本体部継手金具標準寸法表 (単位: mm)

| 名称 | 本体部 外径 D ₁ | 拡径部 外径 D ₂ | 種類 | 板厚 | 開先部 (本体部) | | 開先部 (拡径部) | |
|--------|-----------------------------|-----------------------------|----|----------------|-----------|-----|-----------|-----|
| | | | | t ₁ | a | b | a | b |
| 3035 | 300 | 350 | A | 12.0 | 8.0 | 3.6 | 8.5 | 3.8 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 3040 | 300 | 400 | A | 12.0 | 8.0 | 3.6 | 9.5 | 4.0 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 3540 | 350 | 400 | A | 12.0 | 8.5 | 3.8 | 9.5 | 4.0 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 3545 | 350 | 450 | A | 12.0 | 8.5 | 3.8 | 10.0 | 4.2 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 4045 | 400 | 450 | A | 12.0 | 9.5 | 4.0 | 10.0 | 4.2 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 4050 | 400 | 500 | A | 12.0 | 9.5 | 4.0 | 11.0 | 4.4 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 4550 | 450 | 500 | A | 12.0 | 10.0 | 4.2 | 11.0 | 4.4 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 4555 | 450 | 550 | A | 12.0 | 10.0 | 4.2 | 11.5 | 4.6 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 5060 | 500 | 600 | A | 14.0 | 11.0 | 4.4 | 12.0 | 4.7 |
| | | | B | 16.0 | | | | |
| | | | C | 19.0 | | | | |
| 6070 | 600 | 700 | A | 19.0 | 12.0 | 4.7 | 13.0 | 4.9 |
| | | | B | 19.0 | | | | |
| | | | C | 22.0 | | | | |
| 7080 | 700 | 800 | A | 19.0 | 13.0 | 4.9 | 14.0 | 5.2 |
| | | | B | 19.0 | | | | |
| | | | C | 22.0 | | | | |
| 8090 | 800 | 900 | A | 19.0 | 14.0 | 5.2 | 15.0 | 5.5 |
| | | | B | 19.0 | | | | |
| | | | C | 22.0 | | | | |
| 80100 | 800 | 1000 | A | 19.0 | 14.0 | 5.2 | 16.0 | 5.8 |
| | | | B | 19.0 | | | | |
| | | | C | 22.0 | | | | |
| 90100 | 900 | 1000 | A | 19.0 | 15.0 | 5.5 | 16.0 | 5.8 |
| | | | B | 19.0 | | | | |
| | | | C | 22.0 | | | | |
| 90110 | 900 | 1100 | A | 19.0 | 15.0 | 5.5 | 18.0 | 7.0 |
| | | | B | 19.0 | | | | |
| | | | C | 22.0 | | | | |
| 100120 | 1000 | 1200 | A | 22.0 | 16.0 | 5.8 | 20.0 | 7.6 |
| | | | B | 28.0 | | | | |
| | | | C | 28.0 | | | | |

溶接金具標準構造図



a 部詳細



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許容応力度

| 種類 | 有効フレストレス (N/mm ²) | コンクリートの設計 基準強度(N/mm ²) | 長期(N/mm ²) | | | 短期(N/mm ²) | | |
|----|----------------------------------|---------------------------------------|------------------------|------|------|------------------------|------|------|
| | | | 圧縮 | 曲げ引張 | 斜め引張 | 圧縮 | 曲げ引張 | 斜め引張 |
| A | 4 | 105 | 30 | 1.0 | 1.2 | 60 | 2.0 | 1.8 |
| B | 8 | 105 | 30 | 2.0 | 1.2 | 60 | 4.0 | 1.8 |
| C | 10 | 105 | 30 | 2.5 | 1.2 | 60 | 5.0 | 1.8 |

設計用基礎数値

| | | | | | | |
|--------|----------------------|----------------------------|----------------------|-----------------------|-------------|---------------------------------------|
| コンクリート | 設計基準強度 σ_{cu} | 105N/mm ² | 曲げ引張強度 σ_{tu} | 7.5N/mm ² | ヤング係数 E_c | 4.0×10 ⁴ N/mm ² |
| PC鋼棒 | 規格 | JIS G 3137 SBPDL 1275/1420 | | | | |
| | 引張強度 σ_{pu} | 1420N/mm ² | 降伏点応力度 σ_{py} | 1275N/mm ² | ヤング係数 E_p | 2.0×10 ⁵ N/mm ² |

本体部標準性能表

| 名称 (mm) | 外径 D ₁ (mm) | 厚さ T ₁ (mm) | 外径 D ₂ (mm) | 厚さ T ₂ (mm) | 長さ L (m) | 断面積 A ₀ (cm ²) | 種 類 | P C 鋼棒 | | | 換算 断面積 A _e (cm ²) | 換算断面 二次耐力 I _e ×10 ⁶ (mm ⁴) | 曲げ耐力 | | せん断 ひび割れ Q _{cr} (kN) |
|------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------|---|--------|----------------|----------------|---|---|---|-------------------------------------|----------------------------------|--|
| | | | | | | | | 径 φ (mm) | 本数 n (本) | 断面積 A _p (cm ²) | | | 曲げひび割れ M _{cr} (kN・m) | 終局曲げ M _u (kN・m) | |
| 3035 | 300 | 60 | 350 | 85 | 5~13 | 452 | A | 7.1 | 6 | 2.40 | 462 | 353 | 27.2 | 43.4 | 99.1 |
| | | | | | | | B | 10.0 | 6 | 4.71 | 471 | 360 | 37.2 | 76.5 | 126 |
| | | | | | | | C | 11.2 | 6 | 6.00 | 476 | 364 | 41.7 | 92.4 | 136 |
| 3040 | 300 | 60 | 400 | 110 | 5~13 | 452 | A | 7.1 | 6 | 2.40 | 462 | 353 | 27.2 | 43.4 | 99.1 |
| | | | | | | | B | 10.0 | 6 | 4.71 | 471 | 360 | 37.2 | 76.5 | 126 |
| | | | | | | | C | 11.2 | 6 | 6.00 | 476 | 364 | 41.7 | 92.4 | 136 |
| 3540 | 350 | 60 | 400 | 85 | 5~13 | 546 | A | 7.1 | 8 | 3.20 | 559 | 613 | 40.3 | 67.8 | 119 |
| | | | | | | | B | 10.0 | 8 | 6.28 | 571 | 626 | 55.5 | 120.0 | 150 |
| | | | | | | | C | 11.2 | 8 | 8.00 | 578 | 633 | 63.4 | 144.9 | 163 |
| 3545 | 350 | 60 | 450 | 110 | 5~13 | 546 | A | 7.1 | 8 | 3.20 | 559 | 613 | 40.3 | 67.8 | 119 |
| | | | | | | | B | 10.0 | 8 | 6.28 | 571 | 626 | 55.5 | 120.0 | 150 |
| | | | | | | | C | 11.2 | 8 | 8.00 | 578 | 633 | 63.4 | 144.9 | 163 |
| 4045 | 400 | 65 | 450 | 90 | 5~15 | 684 | A | 7.1 | 10 | 4.00 | 700 | 1,018 | 58.5 | 97.2 | 148 |
| | | | | | | | B | 10.0 | 10 | 7.85 | 715 | 1,040 | 80.6 | 172.8 | 187 |
| | | | | | | | C | 11.2 | 10 | 10.00 | 724 | 1,052 | 92.2 | 208.8 | 204 |
| 4050 | 400 | 65 | 500 | 115 | 5~15 | 684 | A | 7.1 | 10 | 4.00 | 700 | 1,018 | 58.5 | 97.2 | 148 |
| | | | | | | | B | 10.0 | 10 | 7.85 | 715 | 1,040 | 80.6 | 172.8 | 187 |
| | | | | | | | C | 11.2 | 10 | 10.00 | 724 | 1,052 | 92.2 | 208.8 | 204 |
| 4550 | 450 | 70 | 500 | 95 | 5~15 | 835 | A | 7.1 | 12 | 4.80 | 854 | 1,594 | 81.7 | 132.4 | 181 |
| | | | | | | | B | 10.0 | 12 | 9.42 | 873 | 1,627 | 112.0 | 237.1 | 228 |
| | | | | | | | C | 11.2 | 12 | 12.00 | 883 | 1,646 | 128.1 | 286.8 | 248 |
| 4555 | 450 | 70 | 550 | 120 | 5~15 | 835 | A | 7.1 | 12 | 4.80 | 854 | 1,594 | 81.7 | 132.4 | 181 |
| | | | | | | | B | 10.0 | 12 | 9.42 | 873 | 1,627 | 112.0 | 237.1 | 228 |
| | | | | | | | C | 11.2 | 12 | 12.00 | 883 | 1,646 | 128.1 | 286.8 | 248 |
| 5060 | 500 | 80 | 600 | 130 | 5~15 | 1,055 | A | 7.1 | 14 | 5.60 | 1,077 | 2,463 | 113.2 | 173.1 | 229 |
| | | | | | | | B | 10.0 | 14 | 10.99 | 1,099 | 2,513 | 155.8 | 312.4 | 288 |
| | | | | | | | C | 11.2 | 14 | 14.00 | 1,111 | 2,541 | 175.6 | 378.9 | 314 |
| 6070 | 600 | 90 | 700 | 140 | 5~15 | 1,441 | A | 7.1 | 19 | 7.60 | 1,472 | 4,935 | 189.5 | 238.8 | 311 |
| | | | | | | | B | 10.0 | 19 | 14.92 | 1,501 | 5,034 | 259.4 | 514.7 | 392 |
| | | | | | | | C | 11.2 | 19 | 19.00 | 1,517 | 5,089 | 292.2 | 625.4 | 428 |
| 7080 | 700 | 100 | 800 | 150 | 5~15 | 1,884 | A | 10.0 | 13 | 10.21 | 1,925 | 8,898 | 292.9 | 445.3 | 406 |
| | | | | | | | B | 10.0 | 26 | 20.41 | 1,966 | 9,081 | 402.2 | 820.7 | 512 |
| | | | | | | | C | 11.2 | 26 | 26.00 | 1,988 | 9,182 | 460.1 | 997.2 | 557 |

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本体部標準性能表

| 名称 (mm) | 外径 D ₁ (mm) | 厚さ T ₁ (mm) | 外径 D ₂ (mm) | 厚さ T ₂ (mm) | 長さ L (m) | 断面積 A ₀ (cm ²) | 種 類 | P C 鋼棒 | | | 換算 断面積 A _e (cm ²) | 換算断面 二次耐力 I _e ×10 ⁶ (mm ⁴) | 曲げ耐力 | | せん断 ひび割れ Q _c (kN) |
|------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------|---|--------|----------------|----------------|---|---|---|-------------------------------------|----------------------------------|---------------------------------------|
| | | | | | | | | 径 φ (mm) | 本数 n (本) | 断面積 A _p (cm ²) | | | 曲げひび割れ M _{cr} (kN・m) | 終局曲げ M _u (kN・m) | |
| 8090 | 800 | 110 | 900 | 160 | 5~15 | 2,383 | A | 10.0 | 17 | 13.35 | 2,437 | 14,871 | 429.2 | 665.1 | 512 |
| | | | | | | | B | 10.0 | 34 | 26.69 | 2,490 | 15,198 | 590.3 | 1226.1 | 647 |
| | | | | | | | C | 11.2 | 34 | 34.00 | 2,519 | 15,377 | 671.3 | 1488.7 | 704 |
| 80100 | 800 | 110 | 1000 | 210 | 5~15 | 2,383 | A | 10.0 | 17 | 13.35 | 2,437 | 14,871 | 429.2 | 665.1 | 512 |
| | | | | | | | B | 10.0 | 34 | 26.69 | 2,490 | 15,198 | 590.3 | 1226.1 | 647 |
| | | | | | | | C | 11.2 | 34 | 34.00 | 2,519 | 15,377 | 671.3 | 1488.7 | 704 |
| 90100 | 900 | 120 | 1000 | 170 | 5~15 | 2,939 | A | 10.0 | 20 | 15.70 | 3,002 | 23,371 | 595.7 | 886.8 | 631 |
| | | | | | | | B | 10.0 | 40 | 31.40 | 3,065 | 23,861 | 821.7 | 1643.7 | 797 |
| | | | | | | | C | 11.2 | 40 | 40.00 | 3,099 | 24,129 | 936.9 | 2004.1 | 867 |
| 90110 | 900 | 120 | 1100 | 220 | 5~15 | 2,939 | A | 10.0 | 20 | 15.70 | 3,002 | 23,371 | 595.7 | 886.8 | 631 |
| | | | | | | | B | 10.0 | 40 | 31.40 | 3,065 | 23,861 | 821.7 | 1643.7 | 797 |
| | | | | | | | C | 11.2 | 40 | 40.00 | 3,099 | 24,129 | 936.9 | 2004.1 | 867 |
| 100 120 | 1000 | 130 | 1200 | 230 | 5~15 | 3,551 | A | 10.0 | 24 | 18.84 | 3,627 | 35,080 | 809.7 | 1185.5 | 762 |
| | | | | | | | B | 10.0 | 48 | 37.68 | 3,702 | 35,810 | 1113.0 | 2201.8 | 961 |
| | | | | | | | C | 11.2 | 48 | 48.00 | 3,743 | 36,209 | 1261.5 | 2687.6 | 1047 |

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