|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| IV. *Determination of the Centre of Gravity of the Fourth Horizontal Section* | | | | | | | | | | |
| Diſtance of the centre of gravity of double the plan 8 *dl&* from its firſt ordinate 8d*.* | | | | | | | | | | |
| Ordinates. | | Double Ord. | | I, Factors. | I. Product\*. | | 2. Fact. | 2. Products. | | |
| Feet. In, | Pts, | , Feet. in. | Pts. |  | Feet. In. | , Pts. |  | Feet, | , In. | Pt! |
| 3 3 | 6 | *6* 7 | 0 | o÷ | I I | 2 | Oτ | 3 | 3 | 6 |
| 7 9 | 0 | 15 6 | 0 | I | *'5 6* | O | I | IJ | 6 | 0 |
| 11 II | 0 | 23 10 | 0 | 2 | 47 8 | O | I | 23 | IO | 0 |
| 14 8 | 9 | 29 5 | *6* | 3 | 88 4 | 6 | I | 29 | 5 | *6* |
| 16 3 | 0 | 32 6 | *0* | 4 | 130 0 | 0 | I | 32 | 6 | 0 |
| 17 4 | 9 | 34 9 | *6* | 5 | 173 i» | 5 | I | 34 | 9 | *6* |
| 18 I | 9 | 36 3 | *6* | 6 | 217 9 | 0 | I | 36 | 3 | *6* |
| »8 5 | 0 | 36 IO | 0 | 7 | 257 10 | 0 | I | 36 | 10 | 0 |
| 18 3 | 0 | 36 6 | 0 | 8 | 292 0 | 0 | I | 36 | 6 | 0 |
| 17 10 | 9 | 35 9 | *6* | 9 | 322 I | 6 | I | 35 | 9 | 6 |
| 17 2 | 6 | 34 5 | 0 | 10 | 340 10 | 0 | I | 34 | 5 | 0 |
| 15 IO | 3 | 31 8 | 6 | II | 348 9 | 6 | I | 31 | 8 | *6* |
| 13 6 | 0 | 27 0 | 0 | I 2 | 324 0 | 0 | I | 27 | 0 | 0 |
| 9 7 | 6 | 19 3 | 0 | 13 | 250 3 | 0 | fc | 19 | 3 | 0 |
| 5 4 | 9 | 10 9 | <>((3×15)-4) × | | ⅛ 73 8 | II | Of | 5 | 4 | 9 |
| 205 7 | 6 | 411 3 | 0 |  | 2883 II | 0 |  | 402 | 6 | 9 |

|  |  |
| --- | --- |
| Hence the diſtance of the centre of gravity of double the plane 8 *d I*G from its firſt ordinate 8 *di* is | |
| 2882 ii 0 2883.916  = >- × 10 0 4= zf-× 10.03 =  402 69 402.56 j | 71.85 |
| Diſtance of this ordinate from the aft fide of the poſt ... | i3∙5 |
| Diſtance of the centre of gravity of the plan from the aft fide of the poſt | 85.35 |
| Diſtance of the centre of gravity of double the trapezium AR *d* 8 from its ordinate AR. | 7.89 |
| Diſtance of this ordinate from the aft fide of the poſt - - » | 0.58 |
| Diſtance of the centre of gravity of the trapezium from the aft fide of the poſt | 8∙47 |
| Diſtance of the centre of gravity of the foremoſt trapezium from its ordinate G*1* | 4∙83 |
| Diſtance of this ordinate from aft ſide of the poſt ... | i53∙78 |
| Diſtance of the centre of gravity of the trapezium from the aft ſide of the poſt | 158.61 |
| Diſtance of the centre of gravity of the ſection of the poſt from its aft ſide | 0.29 |
| Diſtance of the centre of gravity of the ſection of the ſtcm from the aft ſide of<he poſt | 169.>76 |
| The areas of theſe ſeveral plans being calculated, will be as follow t |  |
| 4037.6768 for that of double the plan 8 *dlQ,* and its momentum 4037 6768 × 85.35 = | 3446i5∙7i49 |
| 51.1 2 the area of double the trapezium ARJ8, and its momentum 51.12 × 8.47 — | 432.986¾, |
| 79∙∣6 the area of the foremoſt trapezium, and its momentum 79∙i6 × i58.6l = | i2555∙5676 |
| 0.77 the area of the ſection of the poſt, and its momentum 0.77 × 0.29 ≈ | 0.2233 |
| 0.77 the area of the ſection of the Item, and its momentum 0.77 × 169.76 = \* | 130.7Λ52 |
| 4169.4968 Sum - | 357735∙2O74 |
| Then \_. gς.8o, the diſtance of the fourth horizontal ſection from the aft fide of the ſtern-poſt,  4169.4968 j ’ | |
| V. *Determination of the Centre of Gravity of the fifth Horizontal Section.* | |
| Diſtance of the centre of gravity of double the plan 8 *c k* G from its firſt ordinate 8 *c.* | |
| Ordinates. Doable Ord. 1. Factors» 1. Products. 2. Fact. 2. Products. | |
| Feet. In i,. Feet ln. L·. Feet. In. L. Feet. In. | 1,. |
| 190 360 ©j- 070 O-r 19 | 0 |
| 460 900 i 9001 90 | 0 |
| Over 630 12 60 9 7 0 10 9 | 0 |
| 3∏\* | - |