Now 473560.2148/5952.27 = 84.68, the distance of the centre of gravity of the whole ſection from the aftside of the ſtern-poſt.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| III. *Determination of the Centre of Gravity of the third Horizontal Section.* | | | | | | | | | | | | |
| Diſtance of the centre of gravity of double the plan 8 *e m* G from its firſt ordinate 8 *e>* | | | | | | | | | | | | |
| Ordinates. | | | Double Ord. 1. Factors. | | | I. Products. 2. | | | Fact. | 2. Products. | | |
| Feet. | In. | Pts. | Feet. In. | Pts. |  | Feet. | In | Pts. |  | Feet | In. | Pts. |
| *6* | 7 | 6 | 33 3 | O | o⅜ | 2 | 2 | 6 | of | *6* | 7 | 6 |
| I t | 7 | 6 | 23 3 | O | I | 23 | 3 | 0 | I | 23 | 3 | 0 |
| 3 Ç | I | 0 | 30 2 | O | 2 | 6θ | 4 | 0 | I | 3° | 2 | 0 |
| 17 | I | 3 | 34 2 | 6 | 3 | 102 | 7 | 6 | I | 34 | 2 | 6 |
| 18 | 3 | 0 | 36 6 | 0 | 4 | 146 | 0 | 0 | I | 36 | *6* | 0 |
| 19 | 3 | 0 | 38 6 | 0 | 5 | I92 | 6 | 0 | I | 38 | *6* | 0 |
| l9 | 9 | 0 | 39 6 | 0 | 6 | 237 | 0 | 0 | I | 39 | *6* | 0 |
| 20 | 0 | 0 | 40 0 | 0 | 7 | 28θ | 0 | 0 | I | 40 | *0* | 0 |
| 20 | 0 | 0 | 40 0 | 0 | 8 | 320 | 0 | 0 | I | 40 | *0* | 0 |
| j9 | § | 3 | 39 4 | *6* | *9* | 354 | 4 | 6 | I ■ | 39 | 4 | *6* |
| 5 9 | I | 3 | 38 2 | *6* | 10 | 382 | **I** | 0 | I | 38 | 2 | *6* |
| 18 | I | 0 | 36 2 | 0 | M | 397 | 10 | 0 | I | 36 | 2 | *0* |
| 16 | 3 | 9 | 32 7 | 6 | 12 | 39l | 6 | 0 | I | 33 | 7 | *6* |
| 13 | 2 | 3 | 26 4 | 6 | 13 | 342 | 10 | 6 | I | 26 | 4 | *6* |
| 8 | 4 | *6* | 16 9 | 0 | ((3×i5)-4)× | ⅛= i H | 5 | 6 | of | 8 | 4 | *6* |
| **242** | *5* | 3 | 484 10 | 6 |  | 3347 | 0 | 6 |  | 469 | 10 | *6* |

|  |  |
| --- | --- |
| Hence the diſtance of the centre of gravity of double the plane 8*em*G from its firſt ordinate 8e is | |
| ≡= 469 10 6×1° ° +~ 469∙87 xi°'°3 | 7i∙44 |
| Diſtance of this ordinate from, the aft fide of the poſt - | i3∙5 |
| Hence the diſtance of the centre of gravity of this plan from the aft fide of the poſt is | 84.94 |
| Diſtance of the centre of gravity of double the trapezium AR« 8, from its ordinate AR | 8.03 |
|  |
| jbiſtance of this ordinate from the aft fide of the poſt | 0.58 |
| Diſtance of the centre of gravity of this trapezium from the aft fide of the poſt | 8.61 |
| tya™,... r%f rtf σravitv of the foremoſt traDezium from its ordinate *Gm* | 5.19 |
| Diſtance of this ordinate from the aft fide of the poſt | i53∙78 |
| Diſtance of the centre of gravity of this trapezium from the aft fide of the poſt | 158.97 |
| Diſtance of the centre of gravity of the ſection of the poſt from the aft fide of the poſt | 0.29. |
| Diſtance of the centre of gravity of the ſection of the item from the aft fide of the poſt | 169.76 |
| The areas of theſe ſeveral planes will be found to be as follow : |  |
| 4712.7961 for that of double the plan 8*ιm* G, and its momentum 4712.7961 × 84.94 = | 400304.9007 |
| 93.84 the area of double the trapezium AR 3 e88, and its momentum 93.84 × 8.61 —- | 807.9624 |
| 13 1.1 for the area of foremoſt trapezium, and its momentum 13x.ι × 158.97 — | 20840.967 |
| 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 ſtem, and its momentum 0.77 × 169.76 — | 130.7152 |
| 4939.276*1* Sum | 422084.7706 |
| Now gr.4r, the diſtance of the centre of gravity of the whole ſection from the aft fide of  4939∙2476i ∙, υj  the poſt. Ds^ | |