STATISTICAL TABLES

OF THE

EVAPORATION AND COMBUSTION OF STEAM BOILERS.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **No. of experiment.** | **o**  **i ‘** | 1  9  1  o  β £  9  4  z | **PARTICULARS OF THE BOILERS.** | | | | | | | | | | **PARTICULARS OF THE COMBUSTIO».** | |  | | **PARTICULARS OF THE EVAPORATION FROM THE INITIAL TEMPERATURE OF THE WATER.** | | | | | **ΓARTICL'LARh OP TΠK EVAPORATION OF WATER AT THE TEMPERATURE OF 112«.** | | | | | **pahucvlars of the PROPORTIONS OF HEATED SURFACE 10 FUEL BURNT ARΠ WATER EVAPORATED.** | | | | | |
| i  • •5  0  g  0 h | 9 ε  c  .c o  6  Z.  3  3 | ∙≡ | 1  a | a | 1  ■  M  s  5  M  \*8  «  s 3  o H | a  5  3  I  i  » | 8  1  9  i  6  8  o  i  1  ■  h\* ⅞.  9 ► βr ∙≡ | ⅛  «  1  s \_  8=  ∣3  ⅞8  ■£ c  ∏  »3.C | ί  t  1  o  4 ⅛ | 1  1  r  4 it *2%.*  *Λ»* V s | s  £ \_  ≡∙ς  s. *a.*  ⅛  S a> ∙≡∙5 j '∙>  *— a*  u S  ⅛⅛ | ά  ■  1  k  β  •5 . ¾i  ≡∙≡ ≡∙i If | •a  I  1  J≡ ⅛ s H  j 8 d lb∙.  49.4  35.0 | *i* o *Λ*  ⅜  &  1  &  fl  F  2 P ω | 0  ≤  H  £ ι  a  1  t ⅞  c . o — £.5 | i  M> c Ï  L  is τ s  ≡ ‰l \*\* o n ⅞\*∙  C W  ii | Io  ► ≡ 5 pl φ.  ≡ =■ c o⅛ ≡- e⅛∙S ST | L⅛ h 5?  t⅞ « ∙- \*≤.∙ ⅛ζf  tι IB £s.S | o  *Λ*  ►»  *Λ*  3  ■  E  O  Si  9  ►  V  i. | 1  o  M  fl  ■  L  ► «J a, « *∙≡ if* ∙≡⅞  •8« c o *It* | ⅛i  si  5 e  ≡j s. eβ∙c | u s  *Λ*  i  ⅛  i  i | IÉ  fl  hc | L  it  8\*  Ü  « o | i≡ β ©·“ il o  i-  er⅛ | ⅛ ⅛u  iρ  ≡s\*  J≡  ⅛ hi  ≡ 1. ?  tr≡ o | ≡ι If rs⅛  MÎ | M ≈s∙  ≡S3  • C W ï fc∙5 <⅛s ≤ iεs  o ‰ ≡ ■ha  W | u  ≡ t . ∙O⅛ ⅛ °?5 wΛ O ⅛ E⅞8∙ e w∙e lx? |
| I  II. | Cornwall, ∏uel Towan United Mines | @@\*W.  W. | Cyl. Cyl. | ft.  36  2, i 36  1.1 40 | ft. | ft. In.  6 0  6 4 | s<∣. n. >600  3170 | sq. ft.  114  93 | ∙q. ft.  24b6  3072 | ft.  152.  153. | β4. »1.  72.0  70.0 | lös.  2.83  4.09 | lb⅛.  0.078  0.093 | drg.  93.8  96.0 | c. tv.  34.82  48.04 | ιυs.  10.58  10.48 | IDS».  5.90  5.95 | lt>a.  29.94  42.90 | lus.  0.829  0.977 | 11MS.  11.89  11.76 | 1I)F.  5.25  5.31 | 33.  18. | 6G  13 | η».  0.932  1.096 | ⅛q. tl.  36.11  •13.68 | βq. ft  12.75  10.72 | ∙q. ft.  1.205  1.022 | κq. ft.  1.072  0.91! | »4. tu  74.67  63.91 | \*q. K.  67.04  56.98 |
| tu | Mean of exp. )  I. ft II. J | w. | Cyl. | 3 | 36.66∣ | ∙∙ | 6 2 | 2885 | 106 | 2779 | 155. | 71.0 | 3.46 | 0.085 | 94.9 | 42.2 | 41.43 | 10.53 | 5.92 | 36.42 | 0.903 | 11.82 | 5.28 | 40.89 | | 1.014 | 39.99 | 11.73 | 1.113 | 0.991 | 69.30 | G2.01 |
| III. | East Crinnis | w. | Cyl. | 3 | 2, >34  1, (36 | ∙∙ | 2, 4 6 9  1,1 7 0 | 2500 | 57 | 2443 | 152.33 | 37.5 | 7.00 | 0.104 | .. | ,, |  | .. | .. | .. | ., | ,, |  |  |  | ,β | 66.66 | 9.52 |  |  |  | β, |
| TV | Binner Downs | w. | cy'∙ | 2 | 30 | .. | 6 0 | 1440 | 76 | 1364 | 132. | 48.0 | 4.62 | 0.1 M | .. |  |  |  |  | .. |  | .. |  |  |  | .. | 30.00 | G 48 |  |  |  |  |
| V. | Warwick | s. | WOR. | 3 | 1, i *lb.0*  2.1 12.5 | 1. Ç 6.0  2. 1 5 0 |  | 455.0 | 107.0 | 338.0 | 50 61 | 70.5 | 4.00 | 0.019 | 93.0 | 2.5 | 41.38 | 9.17 | 6.81 | 36.68 | 5.684 | 10.3 | 6.05 | 41.28 | | 6.396 | 6.45 | 1.61 | 0.1759 | 0.1563 | 10.99 | 9.77 |
| VI. | Clitherυ | L. | wag. | 1 | 20.0 | 5.5 |  | 320. υ | 23.62 | 296.38 | 91.0 | 17.6 | 11.53 | 0.634 | 44.0 | 5.0 | 18.55 | ft.71 | ll>.U4 | 65.90 | 3.625 | t.7< | 9.27 | 77.69 | | 4.273 | 18.18 | 1.57 | 0.275 | 0.234 | 17.25 | 14.63 |
| VII. | Ditto | L. | Mug | 1 | 20.0 | 5.5 |  | 320.0 | 35.43 | 284.56 | 91.0 | 20.25 | 8.02 | 0.507 | 41.0 | 5.0 | 21.62 | 8.32 | 7.51 | 66.75 | 4.224 | 9 79 | 6.Z8 | 78.55 | | 4.970 | 15.80 | 1.97 | 0.236 | 0.201 | 14.80 | 12.57 |
| VIII. IX.  X. XI. XII. | Preston  Ditto  Ditto  Albion Mills... | L. L. L. N. N. | Wag wag.  Wag. Wag. wag. | 1  1  1  1  2 | 13.5  13.5  13.5  16.0  15.0 | 8.0  8.0  8.0  6.0  5.5 |  | 297.0  297.0  297.0  521.5  315.0 | 46.85  l∙i.\*∙'>  46.85  35.0  31.5 | 250.15  250.15  250.15  486.5  313.5 | 70.0  70.0  70.0  70.0  56.0 | 27.75  27.75  27.75  24.5  22.66 | 9.97  9.27  11.88  16.41  12.79 | 0.931  O.8G7  1.110  0.772  0.810 | 76.0  80.0  74.0  100.25  101.50 | 4.0  4.0  4.0  2.5  2.5 | 33.17  35.00  44.25  55.60  32.52 | 7.49  8.49  8.38  8.62  7.00 | 8.33  7.36  7.45  7.24  8.91 | 74.74  78.82  99.65  141.83  89.71 | 6.984  7.3C0  9.311  6.66i  5.891 | 8.56  9.67  9.60  9.63  7.82 | 7.28  6.46  6.50  6.48  8.00 | 85.44  89.77  114.13  158.55  100.1 1 | | 8.000  8.388  10.663  7.448  6.577 | 10.70  10.70  10.70  21.28  15.22 | 1.07  1.15  0.900  1.291  1.189 | 0.143  0.135  0.107  0.150  0.169 | 0.124  0.119  0.093  0.131  0.152 | 9.00  8.48  6.71  9.38  10.60 | 7.82  7.45  5.86  8.39  9.50 |
| Ditto |  |  |
| XIII. | N. | Wn<r. | 2 | 15.0 | 5.5 |  | 345.0 | 52.5 | 292.5 | 56.0 | 40.50 | 6.17 | 0.725 | 96.50 | 2.5 | 31.53 | 8.1∩ | 7.70 | 53.28 | 6.254 | 9.09 | 6.87 | ⅛9.75 | | 7.015 | 8.51 | 1.379 | 0.159 | 0.142 | 10.00 | 8.91 |
| fXlll. | Mean ot exp. ) VI—XIV. f | \*Γ | Wag. | 1 | 36.G6 | 6.5 |  | 342.8! | 39.82 | 302.98 | 72.5 | 26.09 | 10.75 | 0.798 | 77.0 | 3.68 | 34.40 | 7.76 | 8.1S | 83.83 | 6.289 | 8.86 | 7.15 | 95.50 | | 7.166 | 13.88 | 1.315 | 0.171 | 0.149 | 10.77 | 9.39 |
| XIV. | Long Benton .. | N. | Circ | 2 |  | ∙∙ | ». < ιa  1.1 13 6 | 459.0 | 71.0 | 388.0 | 52.8 | 35.10 | 20.34 | 1.55 | 152.0 | 1.5 | 90.00 | 7.87 | 7.93 | 160.25 | 12.250 | 8.37 | 7.46 | 170.36 | | 13.02 | 13.08 | 0.642 | 0.0816 | 0.0767 | 5.10 | 4.79 |
| XV. | Manchester » | \* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Liverpool ’ | o | Loe. | 1 | 7.0 | .. |  | 334.56 | 41.47 | 293.11 | 7.0 | 7.03 | 79.33 | 1.66 | 60.0 | 50.0 | 55.48 | 6.21 | 10.05 | 493.27 | 10.360 | 7.21 | 8.G6 | 573.25 | | 12.04 | 47.59 | 0.581 | 0.096 | 0.080 | 6.02 | 5.03 |
|  | Rail Way.... J |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| XVI | Killingworth... | "≡ o U | Loe. | 1 | 10.0 | ∙∙ |  | 124.06 | 22.56 | 101.5 | ∙∙ | 12.90 | 45.49 | 4.73 | 60.0 | ∙∙ | 41.92 | 4.46 | 14.00 | 203.10 | 21.118 | 5.17 | 12.07 | 235.50 | | 24.48 | 9.61 | 0.211 | 0.047 | 0.040 | 2.95 | 2.55 |
|  | 1 | Ï | 3 | 4 | 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 1 *13* | 24 | | 25 | 26 | 27 | 28 | 29 | 30 | 31 |

@@@\* W. indicates Welsh S. Staffordshire; N. Newcastle; L. Lancashire.