**Calibration of Iterated Greedy Tournament For Small Instances**

|  |  |
| --- | --- |
| Parameter |  |
| Fine Local search : FLS | Yes-No |
| Destruction size : d | 1-2-3-4 |
| Loop Size: VNS Loop | 100-200-300 |
| Tournament Size: Tsize | 2-3-4-5 |

We have 96 combinations \* 5 replications \*162 Instances

**Analysis of Variance**

**Analysis of**

**Variance for RDI -**

**Type III Sums of**

**Squares**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Source* | *Sum of Squares* | *Df* | *Mean Square* | *F-Ratio* | *P-Value* |
| MAIN EFFECTS |  |  |  |  |  |
| A:2LS | 136105. | 1 | 136105. | 314.98 | 0.0000 |
| B:d | 1.9579E7 | 3 | 6.52632E6 | 15103.47 | 0.0000 |
| C:Len\_M | 91404.1 | 2 | 45702.0 | 105.77 | 0.0000 |
| D:Tsize | 1166.59 | 3 | 388.865 | 0.90 | 0.4403 |
| INTERACTIONS |  |  |  |  |  |
| AB | 2597.74 | 3 | 865.914 | 2.00 | 0.1110 |
| AC | 2628.69 | 2 | 1314.35 | 3.04 | 0.0478 |
| AD | 110.021 | 3 | 36.6738 | 0.08 | 0.9683 |
| BC | 14269.4 | 6 | 2378.23 | 5.50 | 0.0000 |
| BD | 1145.4 | 9 | 127.267 | 0.29 | 0.9765 |
| CD | 128.006 | 6 | 21.3344 | 0.05 | 0.9995 |
| RESIDUAL | 3.35838E7 | 77721 | 432.107 |  |  |
| TOTAL (CORRECTED) | 5.34123E7 | 77759 |  |  |  |

All F-ratios are

based on the

residual mean

square error.

1. **Destruction reconstruction**

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d=1 kill experiments we remove it and repeat

**Analysis of**

**Variance for RDI -**

**Type III Sums of**

**Squares**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Source* | *Sum of Squares* | *Df* | *Mean Square* | *F-Ratio* | *P-Value* |
| MAIN EFFECTS |  |  |  |  |  |
| A:2LS | 117938. | 1 | 117938. | 637.42 | 0.0000 |
| B:d | 164526. | 2 | 82262.9 | 444.61 | 0.0000 |
| C:Len\_M | 59900.7 | 2 | 29950.3 | 161.87 | 0.0000 |
| D:Tsize | 1515.61 | 3 | 505.202 | 2.73 | 0.0422 |
| INTERACTIONS |  |  |  |  |  |
| AB | 308.385 | 2 | 154.192 | 0.83 | 0.4346 |
| AC | 2214.03 | 2 | 1107.02 | 5.98 | 0.0025 |
| AD | 110.34 | 3 | 36.7801 | 0.20 | 0.8973 |
| BC | 11834.3 | 4 | 2958.56 | 15.99 | 0.0000 |
| BD | 792.779 | 6 | 132.13 | 0.71 | 0.6382 |
| CD | 157.805 | 6 | 26.3009 | 0.14 | 0.9906 |
| RESIDUAL | 1.07847E7 | 58288 | 185.025 |  |  |
| TOTAL (CORRECTED) | 1.1144E7 | 58319 |  |  |  |

All F-ratios are

based on the

residual mean

square error.

1. **2nd Level Local Search**

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The local search must be enabled.

1. **Destruction reconstruction:**

****

It is clear that we should set it 4

1. **VNS Loop**



It is clear that we should choose VNS=100

**4-Tournamant factor: Tsize**

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There is not a big difference but 2 is better.