|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Method | DE | EBLSHADE | ADELI | NDE | MABC | TLBO | GOTLBO | STLBO | PSO | IJAYA | ISCA | NNA | CWOA | WW |
| DE | = | 0 | 0 | 0 | + | 0 | + | 0 | + | 0 | + | + | + | + |
| EBLSHADE | + | = | 0 | + | + | 0 | + | 0 | + | + | + | + | + | + |
| ADELI | + | + | = | + | + | + | + | + | + | + | + | + | + | + |
| NDE | + | 0 | 0 | = | + | 0 | + | 0 | + | + | + | + | + | + |
| MABC | 0 | 0 | 0 | 0 | = | 0 | + | 0 | + | 0 | + | + | + | + |
| TLBO | + | + | 0 | + | + | = | + | 0 | + | + | + | + | + | + |
| GOTLBO | 0 | 0 | 0 | 0 | 0 | 0 | = | 0 | + | 0 | + | + | + | + |
| STLBO | + | + | 0 | + | + | 0 | + | = | + | + | + | + | + | + |
| PSO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | = | 0 | 0 | 0 | 0 | 0 |
| IJAYA | + | 0 | 0 | 0 | + | 0 | + | 0 | + | = | + | + | + | + |
| ISCA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | = | 0 | 0 | 0 |
| NNA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | = | 0 | 0 |
| CWOA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | = | 0 |
| WW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | + | 0 | = |