**(Report No 1)**

**DESCRIPTION OF CONSTANT DATA**

|  |  |
| --- | --- |
| Technical Report | |
| Information Management Systems | |
| Christmas Decorations Factory  Company ID in IFS Application: B3  The login to the system is: D13 | |
|  | 20.03.2024. |

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**Description of the production process:**

Our company name: Jingle Bell Jungle The director is: Santa Claus Its registered office is headquartered in: Frigg Fjord. The company is engaged in the production of Christmas Decorations We create two final products: Christmas Light and Christmas Ornaments Set In our company we have 1 department, each of which deals with a different element of production:

* **Decoration Manufacturing Division**

Our company's products are of the highest quality. Almost 80% of all the products we use are manufactured in our factory. The products we buy are:

* Paint
* Copper
* Aluminum
* Plastic
* Wood
* Felt fabric
* Decorative feathers
* Artificial foliage
* Glue
* Screws
* LED bulbs
* PCB
* Rubber

The full bill of materials used in the manufacturing process is shown in Table 1

**Tab 1 – Material Index**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Id | Name | Unit of measurement | Type | Lead time (Jed. Pla) | Total Lead Time (Unit Pla.) | Cost ($) | Total cost ($) | Lowest level of expansion | Warehouse |
| B3\_00 | Christmas Light | pcs | 1 | 1 |  | 25 | 50 | 0 | B3\_W1 |
| B3\_01 | Christmas Ornaments Set | pcs | 1 | 1 |  | 50 | 100 | 0 | B3\_W1 |
| B3\_02 | Paint | ml | 2 |  |  |  |  |  | B3\_W1 |
| B3\_03 | Copper | kg | 2 |  |  |  |  |  | B3\_W1 |
| B3\_04 | Aluminum | kg | 2 |  |  |  |  |  | B3\_W1 |
| B3\_05 | Plastic | kg | 2 |  |  |  |  |  | B3\_W1 |
| B3\_06 | Wood | kg | 2 |  |  |  |  |  | B3\_W1 |
| B3\_07 | Felt fabric | m^2 | 2 |  |  |  |  |  | B3\_W1 |
| B3\_08 | Decorative feathers | pcs | 2 |  |  |  |  |  | B3\_W1 |
| B3\_09 | Artificial foliage | m | 2 |  |  |  |  |  | B3\_W1 |
| B3\_10 | Glue | ml | 2 |  |  |  |  |  | B3\_W1 |
| B3\_11 | Screws | pcs | 2 |  |  |  |  |  | B3\_W1 |
| B3\_12 | LED bulbs | pcs | 2 |  |  |  |  |  | B3\_W1 |
| B3\_13 | PCB | pcs | 2 |  |  |  |  |  | B3\_W1 |
| B3\_14 | EPDM Rubber | kg | 2 |  |  |  |  |  | B3\_W1 |
| B3\_15 | Glitter | g | 1 |  |  |  |  |  | B3\_W1 |
| B3\_16 | Sequins | kg | 1 |  |  |  |  |  | B3\_W1 |
| B3\_17 | Beads | kg | 1 |  |  |  |  |  | B3\_W1 |
| B3\_18 | Copper wire | m | 1 |  |  |  |  |  | B3\_W1 |
| B3\_19 | Ribbon | m | 1 |  |  |  |  |  | B3\_W1 |
| B3\_20 | Pom-poms | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_21 | Miscellaneous small decorations | kg | 1 |  |  |  |  |  | B3\_W1 |
| B3\_22 | Wreath | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_23 | Wreath frame | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_24 | Large ornament A | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_25 | Large ornament B | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_26 | Large ornament C | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_27 | Large ornament D | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_28 | Large ornament E | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_29 | Large plastic base A | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_30 | Large plastic base B | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_31 | Large plastic base C | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_32 | Large plastic base D | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_33 | Large plastic base E | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_34 | Small ball ornaments | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_35 | Small plastic ball | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_36 | Icicle ornament A | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_37 | Icicle ornament B | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_38 | Icicle ornament C | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_39 | Icicle ornament D | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_40 | Icicle ornament E | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_41 | Plastic icicle A | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_42 | Plastic icicle B | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_43 | Plastic icicle C | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_44 | Plastic icicle D | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_45 | Plastic icicle E | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_46 | Wooden dear | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_47 | Wooden tree | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_48 | Wooden car | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_49 | Wooder nutcracker | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_50 | Wooden snowflake | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_51 | Aluminum wire | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_52 | Ornament cap A (Large) | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_53 | Ornament cap B (Small) | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_54 | Bow | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_55 | Tree topper | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_56 | Power adapter | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_57 | Power adapter upper | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_58 | Power adapter lower | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_59 | AC Plug | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_60 | Switch | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_61 | Bulb Socket | pcs | 1 |  |  |  |  |  | B3\_W1 |
| B3\_62 | Sticker | pcs | 1 |  |  |  |  |  | B3\_W1 |

The structure of the product is shown in Table 2

**Tab 2 - Product structure**

|  |  |  |  |
| --- | --- | --- | --- |
| Parent Id | Child id | Wear factors | Operation No. |
| B3\_00 | B3\_22 | 1 | 10 |
|  | B3\_24 | 1 | 20 |
|  | B3\_25 | 1 | 30 |
|  | B3\_26 | 1 | 40 |
|  | B3\_27 | 1 | 50 |
|  | B3\_28 | 1 | 60 |
|  | B3\_34 | 1 | 70 |
|  | B3\_36 | 1 | 80 |
|  | B3\_37 | 1 | 90 |
|  | B3\_38 | 1 | 100 |
|  | B3\_39 | 1 | 110 |
|  | B3\_40 | 1 | 120 |
|  | B3\_46 | 1 | 130 |
|  | B3\_47 | 1 | 140 |
|  | B3\_48 | 1 | 150 |
|  | B3\_49 | 1 | 160 |
|  | B3\_50 | 1 | 170 |
|  | B3\_54 | 1 | 180 |
|  | B3\_55 | 1 | 190 |
| B3\_15 | B3\_04 | 1 | 10 |
|  | B3\_02 | 1 | 10 |
| B3\_16 | B3\_05 | 1 | 10 |
|  | B3\_02 | 1 | 10 |
| B3\_17 | B3\_05 | 1 | 10 |
|  | B3\_02 | 1 | 10 |
| B3\_18 | B3\_03 | 1 | 10 |
| B3\_19 | B3\_07 | 1 | 10 |
|  | B3\_15 | 1 | 20 |
| B3\_20 | B3\_07 | 1 | 10 |
|  | B3\_15 | 1 | 20 |
| B3\_21 | B3\_02 | 1 |  |
|  | B3\_03 | 1 |  |
|  | B3\_04 | 1 |  |
|  | B3\_05 | 1 |  |
|  | B3\_06 | 1 |  |
|  | B3\_07 | 1 |  |
|  | B3\_08 | 1 |  |
|  | B3\_09 | 1 |  |
|  | B3\_10 | 1 |  |
|  | B3\_15 | 1 |  |
|  | B3\_16 | 1 |  |
|  | B3\_17 | 1 |  |
|  | B3\_18 | 1 |  |
|  | B3\_19 | 1 |  |
|  | B3\_20 | 1 |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

The organizational structure is presented in Tables 3,4,5

**Tab 3 – Faculties**

|  |  |
| --- | --- |
| Faculty Id | Faculty Name |
| B3F00 | Ornament Manufacturing Division |
| B3F01 | Light Manufacturing Division |

**Tab 4 - Production cells**

|  |  |
| --- | --- |
| Cell Id | Cell name |
|  |  |
|  |  |
|  |  |

**Tab 5 – Work Cells**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Socket id | Name | Cell Id | Faculty Id | Capacity/day [h] |
| 1 |  |  |  |  |
| ... |  |  |  |  |
| 10 |  |  |  |  |

The layout of the warehouses is shown in Tables 6 and 7

**Tab 6 – Locations**

|  |  |  |
| --- | --- | --- |
| Location Id | name | type |
| B3\_PROD | Jingle Bell Jungle | Inter-Station |

**Tab 7 – Magazines**

|  |  |  |
| --- | --- | --- |
| Warehouse ID | Warehouse name | Id Location |
| B3\_W1 | PROD1 | B3\_PROD |

The method of production is shown in Table 8

**Tab 8 – Routes**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Id | Operation id | Operation name | Duration [sec/unit] | Socket id | | Cell Id | | Faculty ID | |
|  |  |  |  |  | |  | |  | |
|  |  |  |  | |  | |  | |  |
|  |  |  |  |  | |  | |  | |
|  |  |  |  |  | |  | |  | |

A general diagram of the factory is shown in Figure 1:

|  |
| --- |
|  |

Fig 1. Factory Organization Chart

A graphical representation of the product structure is shown in Figure 2:

|  |
| --- |
|  |

Fig 2. Graphical representation of the structure of the product

The flow of materials through the production stations is shown in Figure 3

|  |
| --- |
|  |

Fig 3. Flow of materials through production stations

The workload of work centers with a single order is shown in Table 9

**Tab 9 Unit Cumulative Order Load:**

|  |  |  |
| --- | --- | --- |
| Nest | Load [h] | Production capacity [h] |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

The limit load for final orders is ..... products within a single planning period.