**Kamstrup MES APIs**

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| --- | --- |
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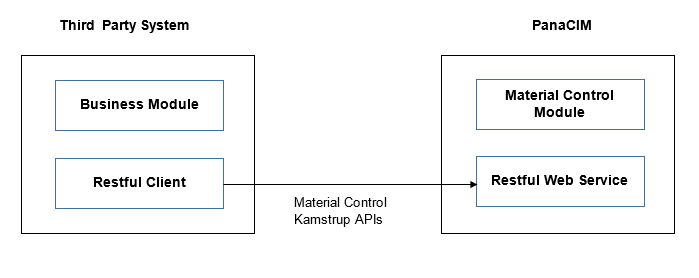
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# Kamstrup MES API

The Kamstrup MES API specification provides standard format/procedure to get or update the material control information in PanaCIM. The PanaCIM system acts as material master source manages material reservation and tracking.



## Assumptions and Constraints

Following assumptions and constraints are applicable for Kamstrup API.

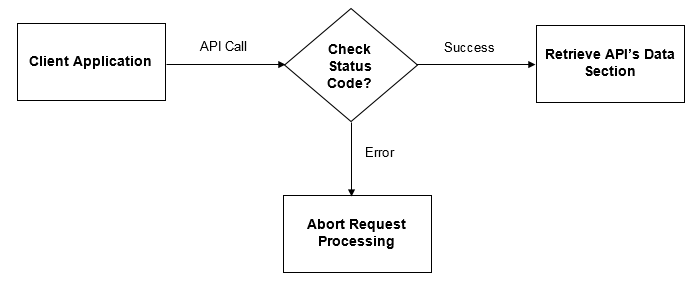
* The specification is only available for PanaCIM EE Material Control module.
* The barcode parsers in the third party system must be same as configured in the PanaCIM system.
* JSON is used as data format.
* Each route name must be unique.
* Each work order name must be unique.

## License Requirement

PanaCIM EE should have the license configured for the functions requested.

# API Specifications

The APIs are exposed by PanaCIM and returns HTTP Status Code (OK) 200 once the request reach to PanaCIM. The client application first checks the status code, if the status code is OK, then client application retrieves the data section. The ErrorCode field specifies any error condition while processing the request. The ErrorCode 0 (SUCCESS) refers the successful processing the request.



The following table lists all Kamstrup MES APIs for Material Control module.

|  |  |  |
| --- | --- | --- |
| **S.No** | **API Name** | **Screenshot** |
| 1. | getLines | Get line/route list configured in PanaCIM. |
| 2. | getLineDetail | Get detail configuration for a line/route in PanaCIM |
| 3. | getProductSetups | Get product setup in PanaCIM for a route/line. |
| 4 | getSetupFeederDetail | Get product setup detail in PanaCIM for a setup ID and route combination. |
| 5. | createMaterial | Notify PanaCIM when a reel/material is created. |
| 6 | getMaterialStatus | Get material status of the specified material ID. |
| 7 | updateMaterial | Get material details for a requested material ID. |
| 8 | getMaterial | Get available location list for requested part number. Route Name must be specified. |
| 9 | getMaterialsDetail | Get the details of the specified material. |
| 10 | getPartLocation | Get available location list for requested part number for a route / line. |
| 11 | getWorkOrderList | Get list of work orders in PanaCIM by their status. |
| 12 | getWorkOrderDetail | Get details of a specified work order. |
| 13 | addWorkOrder | Add a new work order into PanaCIM for the specified route / line. |
| 14 | getWOPartDetail | Get reserved part details for a specified work order. |
| 15 | pickMaterial4WO | When the picking of material is done by a tier system (Material Tower or any logistic System) PanaCIM is informed which Material ID were picked for a specified WO. |

## getLines

This API gets the list of routes/lines configured in the PanaCIM.

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/config/getLines

**Request Format**

None

**Response Format**

{

"ErrorCode":0,

"Lines":["SMT100","SMT101","SMT102"]

}

The following table describes the response parameters for the getLines API.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| ErrorCode | Integer | API Error code defined in PanaCIM.  0 specifies success. | Yes |
| Lines | Array | Array for the route/line name defined in PanaCIM, e.g. “SMT101”  Route/Line Name does not allow SPACE.  Allow '-' and '\_'.  Max length 20 character. | No |

## getLineDetail

The API gets details of the specified line / route in PanaCIM.

**API Type: POST**

**API URL**: http://<PanaCIMIP>:<PanaCIMPort>/api/Config/getLineDetail

**Request Format**

{

“LineName”: “SMT-101”

}

The following table describes the request parameter for the getLineDetail API.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| LineName | String | Name of line / route in PanaCIM. | Yes |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "LineName": "SMT-101",  "Zones": [{  "Name": "Zone100",  "Type": 0,  "Machine": {  "Name": "SMT01",  "ModelName": "NPM"  },  "Storages": []  },  {  "Name": "Zone101",  "Type": 1,  "Machine": "",  "Storages": [{  "Name": "Tower001"  }]  }  ]  } |

The following table describes the response parameter for the getLineDetail API.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Sub Field** | **Type** | **Description** | **Required** |
| ErrorCode |  | Integer | Status code of API request. 0 refers success. | Yes |
| LineName |  | String | Refers line name for which request is sent. | Yes |
| Zone (Object) | Name | String | Refers the name of zone. | Yes |
| Type | Int | Refers the zone type.   * 0: Production * 1: Material area | Yes |
| Machine | Object | If zone type is material area, machine object will be null. | No |
| Storages | Object | If no storage available for the specifed zone, the field will be null. |  |
| Machine (Object) | Name | String | Name of the machine. | Yes |
| ModelName | String | Model number pf the machine. | Yes |
| Storages  (object) | Name | String | If storage object not null, the field species the storage name. | Yes |

## getProductSetups

The API gets the product setup list for a specified route.

**API Type: POST**

**API URL**: http://<PanaCIMIP>:<PanaCIMPort>/api/MC/getProductSetups

**Request Format**

{

“LineName”: “SMT-R1”

}

The following table describes the request parameter for the getProductSetups API.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| LineName | String | Name of line / route in PanaCIM. | Yes |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "LineName": "SMT-R1",  "Setups": [{  "ID": "SMT-R1\_1001",  "ModelCode": "AAA",  "ProductName": "Prd-001",  "ProductSide": "T"  },  {  "ID": "SMT-R1\_1002",  "ModelCode": "BBB",  "ProductName": "Prd-101",  "ProductSide": "B"  }  ]  } |

The following table describes the response parameter for the getLineDetail API.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Sub Field** | **Type** | **Description** | **Required** |
| ErrorCode |  | Integer | Status code of API request. 0 refers success. | Yes |
| LineName |  | String | Refers line name for which request is sent. | Yes |
| Setups  (Objects) | ID | String | Specifies unique setup string for a setup defined in PanaCIM. | Yes |
| ModelCode | String | Specifies the unique string identify the product setup. | Yes |
| ProductName | String | Specifes product name. | Yes |
| ProductSide | Integer | 0 specfies top side of PCB  1 specifies the bottom side of PCB | Yes |

## getSetupFeederDetail

The API gets the feeder setup details for the specified setup Id and route / line combination in PanaCIM. The API returns the setup details for the requested setup.

API URL: http://<PanaCIMIP>:<PanaCIMPort>/api/MC/getSetupFeederDetail

**Request Format**

{

“SetupIDString”: “SMT-R1\_1001”,

“LineName”: “SMT-R1”

}

The following table describes the request parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| SetupIDString | String | Specifies unique setup ID. | Yes |
| LineName | String | Name of line / route in PanaCIM. | Yes |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "SetupIDString": "SMT-R1\_1001",  "LineName": "SMT-R1",  "RouteID": 1002,  "ModelCode": "AAA",  "ProductName": "Prd-001",  "ProductSide": "T",  "FeederSetups": [{  "MachineName": "SMT-R1-M1",  "CycleTme": "23.50",  "Setups": [{  "PartNo": "0402",  "FdrL": "1005R",  "Qty": 500,  "Pitch": "004"  },  {  "PartNo": "1812",  "FdrL": "1007R",  "Qty": 500,  "Pitch": "004"  }  ]  },  {  "MachineName": "SMT-R1-M2",  "CycleTme": "25.00",  "Setups": [{  "PartNo": "0402",  "FdrL": "1005R",  "Qty": 500,  "Pitch": "004"  },  {  "PartNo": "1206",  "FdrL": "2007",  "Qty": 1000,  "Pitch": "004"  }  ]  }  ],  "SubParts": [{  "MainPart": "0402",  "SubPart": [  "0402-011",  "0402-12"  ]  },  {  "MainPart": "0605",  "SubPart": [  "0605-101"  ]  }  ]  } |

## createMaterial

The API notifies PanaCIM when a reel gets created in MES.

**API TYPE:** POST

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/createMaterial

**Request Format**

{

"ErrorCode": 0,

"MaterialID": "R10001",

"PartNo": "1812",

"Quantity": 1000,

"Lot": "",

"Vendor": "",

"UserData": [

"User1",

"Userdata2"

],

"IsMsd": 0,

"MsdDetail": {

"Msl": "4",

"SealDate": "20170304150000",

"UsedFloorTime": 60

}

}

The following table describes the request parameters.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Sub field** | **Type** | **Description** | **Required** |
| ErrorCode |  | Integer | Specifies the error code.0 refers success. | Yes |
| MaterialID |  | String | Refers unique material ID. | Yes |
| PartNo |  | String | Refers part number / name. | Yes |
| Quantity |  | String | Refers material quantity. | Yes |
| Lot |  | String | Refers material lot number. | No |
| Vendor |  | String | Refers vendor name / number supplier. | No |
| UserData | User1 | String | Specifies user data 1. | No |
| Userdata2 | String | Specifies user data 2. | No |
| IsMsd |  | Integers | Specifies whether material is MSD. | Yes |
| MsdDetail | MSL | String | Specifies MSD level. | No |
| SealDate | Date Time | Specifies MSD material seal date. | No |
| UsedFloorTime | Time | Specifies MSD material used floor time. | No |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "MaterialID": "R10001"  } |

The following table describes the request parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| ErrorCode | Integer | Specifies the error code.  0 refers success. | Yes |
| MaterialID | String | Refers unique material ID. | Yes |

## getMaterialStatus

The API gets the material status for the specified material ID.

**API URL:** <http://localhost:7101/api/Mc/getMaterialStatus>

**Request Format**

{

"MaterialID":"20170223-2125R-001"

}

The following table describes the request parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| MaterialID | String | Specifies the unique material ID to get the material status. | Yes |

## updateMaterial

Notify PanaCIM a reel is updated. The quantity and location could be updated. To modify the location, location name must be material area name configured in PanaCIM. If storage unit or sub storage unit is available in request than MaterialLocation attribute will not be considered to update location.

**API TYPE:** POST

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/updateMaterial

**Request Format**

{

"MaterialID": "MTLSANT",

"PartNo": "0402C",

"Quantity": 1000,

"MaterialLocation": "DryBOX1",

"StorageUnit": "TestSU",

"SubStorageUnit": "TestSubSU"

}

The following table describes the request parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| MaterialID | String | Specifies the unique material ID that needs to be updated. | Yes |
| PartNo | String | Refers unique material ID. | Yes |
| Quantity | Integer | Refers part number / name. | Yes |
| MaterialLocation | String | Updated material location. | No |
| StorageUnit | String | Updated material’s storage unit. | No |
| SubStorageUnit | String | Updated material’s sub storage unit. | No |

**Note:** If storage unit or sub storage unit is available in request than MaterialLocation attribute will not be considered to update location.

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "MaterialID": "R10001"  } |

The following table describes the request parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| ErrorCode | Integer | Specifies the error code.  0 refers success. | Yes |
| MaterialID | String | Refers unique material ID that has been updated. | Yes |

## getMaterial

The API gets status of a material for a requested material ID.

**API TYPE:** POST

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/getMaterialStatus

**Request Format**

{

"MaterialID": "R10001”

}

The following table describes the request parameter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| MaterialID | String | Specifies the unique material ID. | Yes |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "MaterialID": "R1001",  "MaterialAvailStatus": 0,  "PartNo": "1812",  "Quantity": 1000,  "Lot": "",  "Userdata": "",  "WorkOrderName": "",  "Location": {  "Zone": "Zone-5",  "Machine": {  "Name": "SMT-1",  "FdrL": "10005L"  },  "Storage": ""  },  "IsMsd": 1,  "MsdDetail": {  "Msl": "4",  "FloorLifeExpirationTime": "2017-08-29T12:12:14.5249124-05:00",  "ShelfLifeExpirationTime": "2017-09-09T12:12:14.5249124-05:00",  "FloorTimeRunning": 1  },  "PreviousReel": {  "ReelBarcode": "R1002",  "Quantity": 0  }  } |

The following table describes the response parameters.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Sub Field** | **Type** | **Description** | **Required** |
| ErrorCode |  | Integer | Specifies the error code.  0 refers success. | Yes |
| MaterialID |  | String | Refers unique material ID. | Yes |
| MaterialAvailStatus |  | Integer | The following values are applicable:   * 0: Refers material is available to use * 1: Refers material is not defined * 2: Refers material is defined but cannot be used * 3: Refers material is inactive but available for use * 4: Refers material is considered unusable due to MSD * 5: Refers material is in PanaCIM material limited area * 6: Refers material is reserved * 7: Refers invalid component * 8: Refers restricted component * 9: Refers material is spliced and not available for use | Yes |
| PartNo |  | String | Refers part number. |  |
| Quantity |  | Integer | Refers material quantity. |  |
| Lot |  | String | Refers lot number. |  |
| Userdata |  | String | Refers user data. |  |
| WorkOrderName |  | String | Refers work order name. |  |
| Location (Object) | Zone | String | Refers zone name. |  |
| Machine | Object | Refers machine object type that includes machine name and feeder location. |  |
| Storage | String | Refers Storage location. |  |
| Machine (Object) | Name | String | Refers machine name. |  |
|  | FdrL |  | Refers feeder location. |  |
| IsMsd |  | Integer | Specifies whether material is MSD material. |  |
| MsdDetail (Object) | MSL |  | Specifies MSD level for MSD material. |  |
| FloorLifeExpiration  Time |  | Specifies floor expiration time. |  |
| ShelfLifeExpiration  Time |  | Specifies shelf life expiration time. |  |
| FloorTimeRunning | Integer | Specifies whether floor time is running. |  |
| PreviousReel (Object) | ReelBarcode | String | Specifies previous reel ID. |  |
| Quantity | Integer | Specifies quantity of previous reel. |  |

## getPartLocation

The API gets the location list available for a route for the requested part number.

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/getPartLocation

**Request Format**

{

"PartNo": "0805”,

"LineName":"SMT-R2"

}

The following table describes the request parameter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| PartNo | String | Specifies part number. | Yes |
| LineName | String | Specifies line / route name for which part locations need to be checked. | Yes |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "LineName": "SMT-R2",  "Materials": [{  "ReelBarcode": "R001",  "Zone": "Z001",  "Machine": {  "Name": "SMT-1",  "FdrL": "10005L"  },  "Storage": ""  },  {  "ReelBarcode": "R002",  "Zone": "Z001",  "Machine": {  "Name": "",  "FdrL": ""  },  "Storage": ""  },  {  "ReelBarcode": "R014",  "Zone": "Z003",  "Machine": {  "Name": "",  "FdrL": ""  },  "Storage": "ST-1"  }  ]  } |

The following table describes the response parameters.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Sub Field** | **Type** | **Description** | **Required** |
| ErrorCode |  | Integer | Specifies the error code.  0 refers success. | Yes |
| LineName |  | String | Refers line / route name for which part locations is requested. | Yes |
| Materials (Object Array) | ReelBarcode | String | Refers reel barcode (material barcode) | Yes |
| Zone | String | Refers zone name where material is available. | Yes |
| Machine (Object) | Object | Refers machine object type that includes machine name and feeder location. | Yes |
| Storage | String | Refers storage unit name. | No |
| Machine (Object) | Name | String | Refers machine name. | No |
| FdrL | String | Refers feeder location. | No |

## getWorkOrderList

The API gets list of work orders. User can specifies status to get work orders with a particular status. If the status is not specified, the API gets the list of all work orders.

**API Type:** POST

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/getWorkOrderList

**Request Format**

{

"WorkOrderStatus": null,

"StartDateTime": "",

"EndDateTime": "",

"LineName": ""

}

The following table describes the request parameter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| WorkOrderStatus | String | Specifies status of a work order.  If not specified,the API gets the list of all work ordes in PanaCIM. | No |
| StartDateTime |  | Specifies start date and time of work order. | No |
| EndDateTime |  | Specifies end date and time of work order. | No |
| LineName | String | Specifies line name on which the work order. | No |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "WorkOrders": [{  "Name": "W001",  "Status": 0,  "LineName": "SMT-1"  },  {  "Name": "W004",  "Status": 1,  "LineName": "SMT-3"  }  ]  } |

The following table describes the response parameters.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Sub Field** | **Type** | **Description** | **Required** |
| ErrorCode |  | Integer | Specifies the error code.  0 refers success. | Yes |
| WorkOrders (Object Array) | Name | String | Refers work order name. | Yes |
| Status | Integer | Refers work order status. Valid values are:  0 - Created  1 - Reserved  2 – Picked  3 – Production  4 - Closed | Yes |
| LineName |  | Refers line name for which work order has been created. | Yes |

## getWorkOrderDetail

The API gets details of a specified work order.

**API Type:** POST

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/getWorkOrderDetail

**Request Format**

{

"WorkOrderName": "WO-003"

}

The following table describes the request parameter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| WorkOrderName | String | Name of work order to get work order details. | No |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "WorkOrderName": "WO-003",  "ProductName": "Product-1",  "ProductSide": "T",  "Status": 0,  "RequiredQuantity": 100,  "Batches": [{  "ID": 1000,  "ProducedQuantity": 10,  "StartTime": "20170630093000",  "EndTime": "20170708180000"  }],  "LineName": "SMT\_R1",  "MixName": "Program"  } |

The following table describes the response parameters.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Sub Field** | **Type** | **Description** | **Required** |
| ErrorCode |  | Integer | Specifies the error code.  0 refers success. | Yes |
| WorkOrderName |  | String | Refers work order name. |  |
| ProductName |  | String | Refers product name. |  |
| ProductSide |  | String | Refers product side. |  |
| Status |  | Integer | Refers work order status. Valid values are:  0 - Created  1 - Reserved  2 – Picked  3 – Production  4 - Closed |  |
| RequiredQuantity |  | Integer | Refers material reserved quantity. |  |
| Batches (Object) | ID | String | PanaCIM internal ID associated with batch. | Yes |
|  | ProducedQuantity | Integer | Refers board produced count for work order. |  |
|  | StartTime | String | Refers work order start time. |  |
|  | EndTime | String | Refers work order end time. |  |
| LineName |  | String | Refers line name in PanaCIM. |  |
| MixName |  | String | Refers product mix name. |  |

## addWorkOrder

The API adds a new work order in PanaCIM for the specified route / line name.

**API Type:** POST

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/addWorkOrder

**Request Format**

{

"LineName": "SMT\_R5",

"WorkOrderName": "WO-003",

"ProductName": "Product-1",

"ProductSide": "T",

"Status": 0,

"RequiredQuantity": 100,

"StartTime": "20170630093000",

"EndTime": "20170630113000",

"MixName": "Program"

}

The following table describes the request parameter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| LineName | String | Refefs the line name for which work order needs to be created. | Yes |
| WorkOrderName | String | Refers the name of work order to be created. | No |
| ProductName | String | Refers the product name for work order. |  |
| ProductSide | String | Refers the product side. |  |
| Status | Integer | Refers work order status. |  |
| RequiredQuantity | Integer | Refers required quantity. |  |
| StartTime | String | Refers work order start time. |  |
| EndTime | String | Refers work order end time. |  |
| MixName | String | Refers mix name. |  |

**Response Format**

|  |
| --- |
| {  {  "ErrorCode": 0,  "LineName":"SMT\_R5",  "WorkOrderName": "WO-003"  }  } |

The following table describes the response parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| ErrorCode | Integer | Specifies the error code.  0 refers success. | Yes |
| LineName | String | Refers line name for which work order has been created. | Yes |
| WorkOrderName | String | Refers the name of the created work orders. | Yes |

**Note:**

* If “End Time” is not specified, PanaCIM calculate the end time based on cycle time.
* If “End Time” is specified, PanaCIM uses it as specified.
* If an overlap is detected by PanaCIM, the API returns an error.

## getWOPartDetail

Get reservation details for the specified work order. The API returns material details for the work order.

**Note:**

* IF ReservedQty < RequiredQty it means that there is a Material shortage.
* If Reserved Qty = 0 it means that Material is missing.

**API Type:** POST

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/getWOPartDetail

**Request Format**

{

"WorkOrderName": "WO-003"

}

The following table describes the request parameter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| WorkOrderName | String | Refers the name of work order for which reservation details to be fetched. | Yes |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,  "WorkOrderName": "WO-003",  "ProductName": "Product-1",  "ProductSide": "T",  "Quantity": 100,  "Parts": [{  "PartNo": "0402",  "RequiredQty": 1000,  "ReservedQty": 1100,  "ReservedReels": [{  "ReelBarcode": "R001",  "PartNo": "0402",  "Quantity": 500  },  {  "ReelBarcode": "R005",  "PartNo": "0402-SUB",  "Quantity": 600  }  ]  }, {  "PartNo": "0805",  "RequiredQty": 1000,  "ReservedQty": 0,  "ReservedReels": []  }]  } |

The following table describes the response parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| ErrorCode | Integer | Specifies the error code.  0 refers success. | Yes |
| WorkOrderName | String | Refers the name of the work order. | Yes |
| ProductName | String | Refers product name for work order. |  |
| ProductSide | String | Refers product side for work order. |  |
| Quantity | Integer | Refers work order quantity. |  |
| Parts (Object) | PartNo | Refers part number. |  |
| RequiredQty | Refers required quantity of the part number. | Yes |
| ReservedQty | Refers reserved quantity of the part number. | Yes |
| ReservedReels | Refers reserved reels for the part number. |  |
| ReservedReels | ReelBarcode | Refers reserved reel barcode. |  |
| PartNo | Refers part number of the reel. |  |
| Quantity | Refers reserved reel quantity. |  |

## pickMaterial4WO

When the picking of material is done by a tier system (Material Tower or any logistic System) PanaCIM is informed which Material ID were picked for a specified WO. The API returns 0 (for success) or error code. If success the material is added into picked material list of the work order.

**API URL:** http://<PanaCIMIP>:<PanaCIMPort>/api/MC/pickMaterial4WO

**Request Format**

{

"WorkOrderName": "WO-003",

"ReelBarcode": "R003",

"MachineName": "SMT-001",

"FdrL": "10011L"

}

The following table describes the request parameter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| WorkOrderName | String | Refers the name of work order for which material needs to be picked. | Yes |
| ReelBarcode | String | Refers the reel barcode of the material. | Yes |
| MachineName | String | Refers machine name where work order will run. | Yes |
| FdrL | String | Refers feeder location for which material needs to be pciked. | Yes |

**Response Format**

|  |
| --- |
| {  "ErrorCode": 0,    } |

The following table describes the response parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| ErrorCode | Integer | Specifies the error code.  0 refers success. | Yes |

## getMaterialsDetail

The API gets the material status for the specified material ID.

**API URL:** <http://localhost:7101/api/mc/getMaterialsDetail>

**Request Format**

{

{"InquireReelBarcodes":["10089126B239","1007110LW001"]}

}

The following table describes the request parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| InquireReelBarcodes (Array) | Object | Specifies the list of material barcodes to be inquired. | Yes |

**Response Format**

|  |
| --- |
| {  "Materials": [{  "InquireReelBarcode": "10089126B2E039",  "CurrentReelBarcode": "10089126B8Y040",  "CurrentReelQty": 10000,  "SpliceReelBarcode": "10089126B2E039",  "SpliceReelQty": 10000  }, {  "InquireReelBarcode": "100711013LW001",  "CurrentReelBarcode": "100711013LV005",  "CurrentReelQty": 1000,  "SpliceReelBarcode": "100711013LW001",  "SpliceReelQty": 1000  }],  "Result": {  "ResultCode": 0,  "ResultMessage": ""  }  } |

The following table describes the response parameters.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Description** | **Required** |
| ErrorCode | Integer | Specifies the error code.  0 refers success. | Yes |
| Materials (Object) | InquireReelBarcode | Refers barcode of the inquired reel. |  |
| CurrentReelBarcode | Refers the current reel associated with the inquired reel barcode. |  |
| CurrentReelQty | Refers current reel quantity. |  |
| SpliceReelBarcode | Refers spliced reel barcode associated with the inquired reel barcode. |  |
| SpliceReelQty | Refers spliced reel quantity. |  |