Interface Description

1.History

Version	Date	Kürzel	Changes
2.46	2018-09-05	Tiedemann	Document converted from excel version2.45 Interface 14 added
2.47	2018-24-05	Tiedemann	Errors in description of Interface 13 fixed Interface 14 added

2.Interface 1 Query stock

Interface for a query of the stock by a superior system. The data base procedure is located in the database of the storage control.
A MS SQL Server 2000 (MSDE) is used, it is installed to the PC of the storage control during the commissioning

2.1Details

SQL-Function: GetBestand
Data base: Data base of the storage control lagerdb
Function is called by a superior system. The function has no parameters, it returns data sets of the following format

Column name	Datatype	Size
Identnummer	nvarchar	50
Material	nvarchar	50
Dekor	nvarchar	50
Laenge	int	4
Breite	int	4
Dicke	int	4
Maserung	int	4
OptiMatParam	nvarchar	50
OptiBoardParam	nvarchar	50
OptiFunctionCode	int	4
Kosten	float	8
BestandPhys	int	4
Geplant	int	4
Barcode	nvarchar	50
MaxPaketHoehe	int	4
MinBestand	int	4
Gewicht	int	4
BoardsInformation	nvarchar	50
BestandManuell	int	4

- The field "Identnummer" indicates the clear board code of the board, the ident number of offcuts starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- The field "Maserung" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain
  1 grain direction parallel to board length
  2 grain direction parallel to board width
- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", MaxPaketHoehe,BoardsInformation and MinBestand indicate optimization parameters that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number

- The field "BestandPhys" indicates the physical board inventory for the relevant ident number
- The fields "Geplant" indicates the planned board removal for the relevant ident number (all removal orders that haven't yet been processed)
- The field "Barcode" contains the barcode of a board.
- The field "Gewicht" contains the weight of a board in 1/10 kg
- The field "BestandManuell" indicates the board inventory in manual storage locations for the relevant ident number

2.1.1Course

The communication is done by a stored SQL-Function that can be called up at any time in order to demand the physical board inventory and the planned board removal of the storage.
Example:

```
SELECT *
FROM [lagerdb].[dbo].[GetBestand] ()
```

Being a SQL function it can easily be linked to other SQL queries

3.Interface 2 Master data update

Interface for a transfer of board master data by a superior system to the storage control
A table is in the data base of the storage control
A MS SQL Server 2000 (MSDE) is used, it is installed on the PC of the storage control during the commissioning

3.1Details

Table name: Stammdata
Data base: Data base of the storage control lagerdb
Table is written in by a superior system

Column name	Datatype	Size	NULL allowed
Id	int	4	No
Identnummer	nvarchar	50	Yes
Material	nvarchar	50	Yes
Dekor	nvarchar	50	Yes
Laenge	int	4	Yes
Breite	int	4	Yes
Dicke	int	4	Yes
Maserung	int	4	Yes
OptiMatParam	nvarchar	50	Yes
OptiBoardParam	nvarchar	50	Yes
OptiFunctionCode	int	4	Yes
Kosten	float	8	Yes
Funktion	int	4	Yes
Antwort	int	4	Yes
Status	int	4	Yes
Updatedatum	Datetime	8	Yes
Barcode	nvarchar	50	Yes
MaxPaketHoehe	int	4	Yes
MinBestand	int	4	Yes
BoardsInformation	nvarchar	50	Yes
AntwortText	nvarchar	255	Yes
PlattenGruppe	nvarchar	50	Yes

- "Id" has identity = Ja (ID-Startwert = 1;ID-Schrittweite = 1). All other columns have standard adjustments. The column "Id" is only used to determine the sequence when several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "Identnummer" indicates the clear board code of the board, the ident number of the offcuts starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- The field "Maserung" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain

1 grain direction parallel to board length
2 grain direction parallel to board width

- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", MaxPaketHoehe,BoardsInformation and MinBestand indicate optimization parameters that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The field "Funktion" indicates the function of the data set. It may have the following values:
  0 Ident number shall be newly compiled or re-written if ident number exists
  2 Ident number shall be newly compiled or re-written if ident number exists (optimization parameters shall be not re-written if ident number exists)
  1 Ident number shall be deleted
  optimization parameters for function value 2 are the following parameters: Dekor,OptiMatParam,OptiBoardParam,OptiFunktionCode,Kosten,Barcode,MaxPaketHoehe,MinBestand,BoardsInformation
- The field "Antwort" only is written in by the storage control and indicates the answer of the storage control to the function of the data set. It may have the following values:
  0 Function (Löschen, Neuanlegen oder Überschreiben) has been executed
  1 Function (Löschen oder Überschreiben) could not be executed because there are still boards of the ident number available in the storage
  2 common error (e.g. function not defined)
  3 no template for the dimensions for the creation of the ident number existent
- The field "Status" has the following functions:
  0= Data are just processed
  10=Data are transferred from the writing system
  20=Data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated on each writing access, the UpdateDatum is set by the DB-Server via an Update and Insert Trigger
- The field "Barcode" contains the barcode of a board.
- The field "Antworttext" indicates the answer-text corresponding to the field "Antwort" which are specified above
- The field "PlattenGruppe" is a additional field witch can be used to select templates

3.1.1Course

- For each ident number that has automatically been compiled, re-written or deleted by the storage, there is written a data set by the superior system into the table. In doing so the status field is set to value 10. When the storage has processed the data set, the field "Antwort" is correspondingly written and the status field is set to value 20 in order to enable the further process of the data set by the superior system
- The field status is set to value 10 when registered. When reading the value is set to 20.
  After an adjustable time data sets with status value 20 are automatically by the system

Example for the use of the field status

Right:

:
Writing of a data set with status 0
Data in process
Writing of a data set with status 0
Data in process
Writing of a data set with status 0
Data in process
:
:
UPDATE Stammdata SET Status=10 WHERE Sta-
tus=0

Thus the table is not locked and the process is safe in transaction

Wrong:

BeginTransaction
:
Writing of a data set with status
10
Data in process
Writing of a data set with status
10
Data in process
Writing of a data set with status
10
Data in process
:
:
CommitTransaction

The process is safe in transaction but the table is locked and a reading access is not possible while writing
This version may not be used in order to avoid exceeding locking problems

4.Interface 3 offcut storing report

Interface for feedback of offcut storings to a superior system
The table is in the data base of the storage controlDie Tabelle liegt in der Datenbank der Lagersteuerung
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

4.1Details

Table name: Resteinlagerung
Data base: Data base of the storage control lagerdb
Table is written by the storage program

Column name	Datatype	Size	NULL allowed
Id	int	4	Nein
Identnummer	nvarchar	50	Ja
Material	nvarchar	50	Ja
Dekor	nvarchar	50	Ja
Laenge	int	4	Ja
Breite	int	4	Ja
Dicke	int	4	Ja
Maserung	int	4	Ja
OptiMatParam	nvarchar	50	Ja
OptiBoardParam	nvarchar	50	Ja
OptiFunctionCode	int	4	Ja
Kosten	float	8	Ja
PlatzNr	int	4	Ja
Platzbezeichnung	nvarchar	50	Ja
Status	int	4	Ja
Updatedatum	Datetime	8	Ja
Barcode	nvarchar	50	Ja
MaxPaketHoehe	int	4	Ja
MinBestand	int	4	Ja
BoardsInformation	nvarchar	50	Ja

- "Id" has identity = Ja (ID-Start value = 1;ID-step width = 1). All other columns have standard adjustments. The column "Id" is only used in order to determine the succession when processing several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "Identnummer" indicates the clear board code of the offcut, the ident number of offcuts starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- The field "Maserung" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain

1 grain direction parallelly to board length
2 grain direction parallelly to board width

- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", MaxPaketHoehe,BoardsInformation and MinBestand indicate optimization parameters that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The field "PlatzNr" indicates the position number in the manual storage in which the offcut has been stored
- The field "PlatzBezeichnung" indicates the position name of the manual storing position in which the offcut has been stored
- The field "Status" has the following functions:
  0= Data are just processed
  10=Data are transferred by the writing system
  20=Data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated on each writing access, the setting of the UpdateDatum is done by the DB-Server via an Update and Insert Trigger
- The field "Barcode" contains the Barcode of a board.
- The fields Preis indicates a finacial price or cost of each panel the user has made as a manual input at the timestamp he generates the infeed job. This price indicates a individual price of a separate panel in the storage. It differs from the field cost in the masterdata table which indicates the generally Kosten of a specific identnumber

4.1.1Course

- Every time an offcut is stored into the manual offcut storage a data set is written in the table. In doing so the status field is set to value 10. A superior system can read-out these data sets and subsequently set the status field to value 20 in order to mark these as processed
- The field Status is set to value 10 when written in. When reading the value is set to 20. After an adjustable time the data sets with the status value 20 are automatically deleted by the system

5.Interface 4 Query board information

Interface for the query of the board information of each board (supplier, storing date etc.) by a superior system
"The data base procedure is in the data base of the storage control.
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning"

5.1Details

SQL-Function: GetTeileInfo
Data base: Data base of the storage control lagerdb
Function is called by a superior system. The function has no parameters, it returns data sets of the following format

Column name	Datatype	Size
Identnummer	nvarchar	50
PlatzNr	int	4
Lage	int	4
Material	nvarchar	50
Dekor	nvarchar	50
Laenge	int	4
Breite	int	4
Dicke	int	4
Maserung	int	4
OptiMatParam	nvarchar	50
OptiBoardParam	nvarchar	50
OptiFunctionCode	int	4
Kosten	float	8
Lieferant	nvarchar	1024
Bestellpos	nvarchar	1024
Bestellnr	nvarchar	1024
Anlieferdatum	datetime	8
Einlagerdatum	datetime	8
Barcode	nvarchar	50
MaxPaketHoehe	int	4
MinBestand	int	4
Typ	int	4
Lauf	nvarchar	1024
Plan	nvarchar	1024
BoardsInformation	nvarchar	50
Preis	int	4

- The field "Identnummer" identicates the clear board code, the ident number of offcuts starts always with an X
- The fields "PlatzNr" and "Lage" indicate the relevant storage position number and the layer in the storage position in which the board is arranged (Lage1 = bottom layer in the stack)

- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- The field "Maserung" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain
  1 grain direction parallelly to board length
  2 grain direction parallelly to board width
- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", BoardsInformation, MaxPaketHoehe and MinBestand indicate optimization parametres that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The fields "Lieferant", "Bestellpos" and "Bestellnr" indicate the supplier data that have been entered while storing of the board by the operator
- The fields "Anlieferdatum" and "Einlagerdatum" indicate the delivery resp. the storing date of the board
- The field "Barcode" contains the barcode of a board.
- The field "Typ" indicates the type of the storage position. It may have the following values:
- 0 automatic storage position
  1 storage positions for manual plane storage
  2 storage position for manual offcut storage
  3 storage position for manual stack storage
  4 removal carriage for saw 1
  5 removal carriage for saw 2
  6 removal carriage for saw 3
- The fields "Lauf" and "Plan" indicate the optimization run and cutting plan for what the relevant ident number is reserved in the storage position, they are only valid for pre-removal positions and removal carriages
- The fields BoardsInformation indicate optimization parameters that can be allocated to the relevant ident number.
- The fields Preis indicates a finacial price or cost of each panel the user has made as a manual input at the timestamp he generates the infeed job. This price indicates a individual price of a separate panel in the storage. It differs from the field cost in the masterdata table which indicates the generally Kosten of a specific identnumber

5.1.1Course

- The communication is done by a stored SQL-Function that can be called-up at any time in order to read back the specific information to each board in the storage.
  Example:

```
SELECT *
FROM [lagerdb].[dbo].[GetTeileInfo] ()
```

  Due to the realisation as SQL Function it can easily be linked to other SQL queries.

6.Interface 5 Offcut order

Interface for ordering storing or removal of manually/automatically stored offcuts (or facultative boards)
"The table is in the data base of the storage control
A MS SQL Server 2000 (MSDE) is used, it is installed on the PC of the storage control during the commissioning"

6.1Details

Table name: Restteilauftrag
Data base: Data base of the storage control lagerdb
Table is written in by a superior system

Column name	Datatype	Size	NULL allowed
Id	int	4	No
Identnummer	nvarchar	50	Yes
Material	nvarchar	50	Yes
Dekor	nvarchar	50	Yes
Laenge	int	4	Yes
Breite	int	4	Yes
Dicke	int	4	Yes
Maserung	int	4	Yes
OptiMatParam	nvarchar	50	Yes
OptiBoardParam	nvarchar	50	Yes
OptiFunctionCode	int	4	Yes
Kosten	float	8	Yes
PlatzNr	int	4	Yes
Funktion	Int	4	Yes
Antwort	Int	4	Yes
Status	Int	4	Yes
Updatedatum	Datetime	8	Yes
Barcode	Nvarchar	50	Yes
MaxPaketHoehe	Int	4	Yes
MinBestand	Int	4	Yes
Lauf	Nvarchar	1024	Yes
Plan	Nvarchar	1024	Yes
MachineNumber	Int	4	Yes
BoardsInformation	Nvarchar	50	Yes
Bestellnr	Nvarchar	1024	Yes
Bestellpos	Nvarchar	1024	Yes
Lieferant	Nvarchar	1024	Yes
PlatzBezeichner	Nvarchar	255	Yes
DrehInfo	Int	4	Yes
Gewicht	Int	4	Yes
AntwortText	Nvarchar	255	Yes

PlattenGruppe	Nvarchar	50	Yes

- The field "Identnummer" identifies the unequivocal board code of the board, the ident number of offcut boards starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board, the field Dekor doesn't to be occupied at removal orders
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- "The field ""Maserung"" indicates the grain direction of the relevant ident number. It can have the following values:
- 0 no grain
  1 grain direction parallelly to board length
  2 grain direction parallelly to board width
  This field doesn't need to be occupied at removal orders
- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", BoardsInformation, MaxPaketHoehe and MinBestand indicate the optimization parametres that can be allocated to the relevant ident number. These fields don't need to be occupied at removal orders
- The field "Kosten" indicates the costs per m² for the relevant ident number, this field doesn't need to be occupied at removal orders
- The field "PlatzNr"" indicates the position number in the manual storage area,
  if the field Platznr = 0 at storing orders, the position is allocated by the storage control,
  if a valid position is entered at storing orders, the storing is effected to the position allocated by the Platznr.
- The field "Funktion"" has the following functions:
  0= Offcut shall be stored (on successful transaction the field PlatzNr allocates the position in which the board had been booked) (optimization parameters shall be re-written if ident-number exists)
  2= Offcut shall be stored (on successful transaction the field PlatzNr allocates the position in which the board had been booked) (optimization parameters shall be not re-written if i-dent-number exists)
  3= Only request for an offcut which shall be stored; to determin whether an offcut will be stored in automatic or in manual area or if there is more capacity in this storage areas (nothing will be stored)
  1= if PlatzNr > 0: Offcut has manually been taken off the position allocated by the PlatzNr in manual storage area and has to be booked out by the storage system
  PatzNr could also have the value of a automatic infeed place, in this case it indicates that the board been taken off from the position allocated by the PlatzNr in automatic infeed place
  if PlatzNr = 0 and robot storage system:
    - only when board is placed in automatic storage area the storage system will create an outfeed-job and soon bring out the board automatically (answer 15)
    - when board is placed in manual storage area the storage system will not book out the board (answer 8)"
- The field "Antwort"" is only written by the storage control and indicates the answer of the storage control to the function of the data set. It may have the following values:
  - Answer for function 0, 2:
    0 Function has been executed successfully, board should be transfered to manual storage area by the user
    1 Error: Ident number defined with other data in the storage
    2 common error (e.g. function not defined)

3 no template for the dimensions for creation of the ident number existent
4 Error: Part couldn't be booked (e.g. data base connection interrupted)
5 no more capacity in the storage
11 Position number not valid or position number not compiled
100 Function has been executed successfully, board should be transfered to automatic storage area by the user

- Answer for function 1:
  6 no board existent in the storage and ident number not defined
  7 no board existent in the storage, ident number was deleted
  8 no board existent in the storage, ident number was not deleted
  9 board deleted in manual storage area, ident number deleted
  10 board deleted in manual Storage area, ident number not deleted
  15 created a outfeed-job for an automatic robot storage system
  16 board deleted in automatic storage infeed-area, board code deleted
  17 board deleted in automatic storage infeed-area, board code not deleted
  18 board existent but not deleted because of activity on infeed place
- Answer for function 3:
  0 Function has been executed successfully, board belongs to manual storage area
  1 Error: Ident number defined with other data in the storage
  2 common error (e.g. function not defined)
  3 no template for the dimensions for creation of the ident number existent
  4 Error: Part couldn't be booked (e.g. data base connection interrupted)
  11 Position number not valid or position number not compiled
  12 board belongs to manual storage area but there is no more capacity in this storage area
  14 board belongs only to automatic storage area but there is no more capacity in this storage area
  100 Function has been executed successfully, board belongs to automatic storage area

- The field "Status" has the following functions:
  0= data are just processed
  10=data are transferred from writing system
  20=data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated with each writing access, the UpdateDatum is set by the DB-Server via an Update and Insert Trigger
- The field "Barcode" contains the Barcode of a board if the Barcode is not the same like the Idennummer. Otherwise the Barcode can remain empty
- The fields "Lauf" and"Plan" indicate the optimization run and cutting plan for the relevant ident number. The field are only evaluated on function=1 (booking off of offcuts). When boards for a certain run and plan have already been taken off and are laying in a removal carriage, then exactly the board indicated over run and plan is booked out of the removal carriage
- The field "MachineNumber" indicate the machine from which the offcut was generated. Depending on this number different groups of storage places will be used if an offcut was generated at different machines. Valid Numbers are 1-5. If this field is left to NULL or 0 the default storageplacegroup (used for every machine) will be used
- The fields "Lieferant", "Bestellpos" and "Bestellnr" indicate the supplier data
- The field "PlatzBezeichner" indicates a free text as a comment for the field PlatzNr, which is stored in the storagesoftware at each storageplace to give the operartor additional information about the storageplace PlatzNr

- The field "DrehInfo" indicates the orientation of the relevant ident number. It has the following meaning:
  0= Orientation of the relevant ident number will be defined in the attached storagea system
  1= Orientation of the relevant ident number is "unturned" so length of the panel is parallel to the crane axis of the storage machine
  2= Orientation of the relevant ident number is "turned" so width of the panel is parallel to the crane axis of the storage machine
- The field "Gewicht" indicates the weight of the board. Normaly this field schould contain 0 or NULL. In this case the machine will determine the weight of automatic stored boards. Only if the weight of the board is exactly known (e.g. by determination from an other Homag Automation WoodStore-System) this field schould contain the weight in 1/10 kg
- The field "Antworttext" indicates the answer-text corresponding to the field "Antwort" which are specified above
- The field "PlattenGruppe" is a additional field witch can be used to select templates

6.1.1Course

- A data set is written into the table by an superior system for each offcut that shall be stored or has manually been removed (robot system: shall automatically be outfeeded). In doing so the status field is set to value 10. The storage control is able to readout the data sets and to set the status field to value 20 in order to mark them as processed.
  If an offcut shall be stored the storage control enters it accordingly in the interface 3 (offcut storing report) from which the storing position to that the storage booked the offcut can be read-out.
- Notice:
  This Interface can also be used to book panels (not only offcuts) into or out of a manual storage
- The field Status is set to value 10 when writing. When reading it is set to value 20.
  After an adjustable time the data sets with the status value 20 are automatically deleted by the system

7.Interface 6 Query reservation

Interface for the query of the reserved boards by a superior system
The data base procedure is in the data base of the storage control,
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

7.1Details

SQL-Function: GetReservierung
Data base: Data base of the storage control lagerdb
Function is called by a superior system. The function has no parameters, it returns data sets of the following format

Column name	Datatype	Size
Identnummer	nvarchar	50
Material	nvarchar	50
Dekor	nvarchar	50
Laenge	int	4
Breite	int	4
Dicke	int	4
Maserung	int	4
OptiMatParam	nvarchar	50
OptiBoardParam	nvarchar	50
OptiFunctionCode	int	4
Kosten	float	8
Menge	int	4
Lauf	nvarchar	1024
Plan	nvarchar	1024
Barcode	nvarchar	50
MaxPaketHoehe	int	4
MinBestand	int	4
BoardsInformation	nvarchar	50

- The field "Identnummer" indicated the clear board code, the ident number for offcuts starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The fields "Laenge", "Breite" and "Dicke" contain the dimenstions of the boards in 1/10mm
- The field "Maserung" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain
  1 grain direction parallelly to board length
  2 grain direction parallelly to board width
- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", BoardsInformation, MaxPaketHoehe and MinBestand indicate optimizing parametres that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The field "Menge" indicates the quantity of boards in a package that is reserved for the relevant ident number

- The field "Lauf" indicates the optimizing run for which the relevant ident number is reserved
- The field "Plan" indicates the cutting plan for which the relevant ident number is reserved
- The field "Barcode" contains the bar code of a board.

7.1.1Course

- Communication is done by a stored SQL-Function that can be called-up at any time in order to query the current board reservation of the storage.
  Example:

```
SELECT *
FROM [lagerdb].[dbo].[GetReservierung] ()
```

  With realisation as SQL function it can easily be linked with other SQL queries

8.Interface 7 Query place occupation

Interface for the query of the occupation of manual storage positions by a superior system
The data base procedure is in the data base of the storage control,
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

8.1Details

SQL-Function: GetPlatzBelegung
Data base: Data base of the storage control lagerdb
Function is called by a superior system. The function has no parameters, it returns data sets of the following format

Column name	Datatype	Size
PlatzNr	int	4
Bezeichnung	nvarchar	50
MaxXMass	int	4
MaxYMass	int	4
MaxAnzahl	int	4
Anzahl	int	4
MaxHoehe	int	4
Hoehe	int	4
Typ	int	4

- The field "PlatzNr" indicates the storage positionX
- The field "Bezeichnung" contains a text name of the storage position
- The fields "MaxXMass" and "MaxYMass" contain the maximum dimensions of the storage position in X and Y-direction in 1/10mm
- The field "MaxAnzahl" contain the maximum number of boards that can be kept by the storage position
- The field "Anzahl" shows the number of the currently in the storage position deposited boards
- The fields "MaxHoehe" and "Hoehe" contain the maximal and current height of the storage position in 1/10mm
- The field "Typ" indicates the type of the storage position. It may have the following values:
  0 automatic storage position
  1 storage position for manual plane storage
  2 storage position for manual offcut storage
  3 storage position for manual stack storage
  4 removal carriage for saw 1
  5 removal carriage for saw 2
  6 removal carriage for saw 3
  7 removal carriage for saw 4
  8 removal carriage for saw 5
- At the position types 4,5,6 are only valid the fields PlatzNr,Bezeichnung and Anzahl

8.1.1Course

- Communication is done by a stored SQL-Function that can be called-up at any time in order to query the current board reservation in the storage.
  Example:

```
SELECT *
FROM [lagerdb].[dbo].[GetPlatzbelegung] ()
```

  By the realisation as SQL Function it can easily be linked to other SQL queries

9.Interface 8 Reservation

Interface with that the reservation execution or cancelation may be ordered
The table is in the data base of the storage control
A MS SQL Server 2000 (MSDE) is used, it is installed during the commissioning"

9.1Details

Table name: Reservierung
Data base: Data base of the storage control lagerdb
Table is written in by a superior system

Column name	Datatype	Size	NULL allowed
Id	int	4	No
Identnummer	nvarchar	50	Yes
Material	nvarchar	50	Yes
Dekor	nvarchar	50	Yes
Laenge	int	4	Yes
Breite	int	4	Yes
Dicke	int	4	Yes
Maserung	int	4	Yes
OptiMatParam	nvarchar	50	Yes
OptiBoardParam	nvarchar	50	Yes
OptiFunctionCode	int	4	Yes
Kosten	float	8	Yes
Menge	int	4	Yes
Lauf	nvarchar	1024	Yes
Plan	nvarchar	1024	Yes
Funktion	int	4	Yes
Antwort	int	4	Yes
Status	int	4	Yes
Updatedatum	Datetime	8	Yes
Barcode	nvarchar	50	Yes
MaxPaketHoehe	int	4	Yes
MinBestand	int	4	Yes
BoardsInformation	nvarchar	50	Yes
MachineNumber	int	4	Yes
AntwortText	nvarchar	255	Yes
PlattenGruppe	nvarchar	50	Yes

- Here "Id" has identity = Ja (ID-Start value = 1;ID-step width = 1). All other columns have standard adjustments. The column "Id" is only used for determination of the succession when several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "Identnummer" indicates the clear board code, the ident number of offcuts starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board

- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- The field ""Maserung"" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain
  1 grain direction parallelly to board length
  2 grain direction parallelly to board width
- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", Boardsinformation, MaxPaketHoehe and MinBestand indicate optimizing parametres that can be allocated to the relevant ident number. These fields don't need to be occupied for removal orders
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The field "Menge" indicates the number of boards of the mentioned ident number
- The field "Lauf" indicates the optimization run for which the relevant ident number is / shall be reserved
- The field "Plan" indicates the cutting plan for which the relevant ident number is / shall be reserved
- The field "Funktion" has the following functions:
  0= the mentioned ident number shall be reserved for the mentioned number for the run and plan (optimízing parameters shall be re-written if ident number exists)
  2= the mentioned ident number shall be reserved for the mentioned number for the run and plan (optimízing parameters shall be not re-written if ident number exists)
  1= the reservation for the mentioned ident number shall be withdrawn for the mentioned number for the run and plan
- The field "Antwort" is only written by the storage control and indicates the answer of the storage control to the function of the data set. It may have the following values:
  - Answer for function 0:
    0 Reservation has successfully been processed
    1 Error: Ident number defined with other data in the storage
    2 common error (e.g. function not defined)
    3 no template existent for the dimensions for the creation of the ident number
  - Answer for function 1:
    4 Ident numer not defined
    5 no reservation existent
    6 Reservation withdrawn
    7 Reservation withdrawn, but the mentioned quantity was not completely reserved
- The field "Status" has the following functions:
  0= Data are just in process
  10=Data are transferred by the writing system
  20=Data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated at every writing access, the UpdateDatum is set by the DB-Server via an Update and Insert Trigger
- The field "Barcode" contains the bar code of a board if the bar code is not identically to the ident number. Otherwise the bar code may remain empty
- The field "MachineNumber" indicate the machine for which the reservation has to be processed. Valid Numbers are -1-5. If this field is left to NULL or 0 the default reservation for machine 1 will be used. Has this field the value -1 the reservation is only made in an internal reservation list. All other reservations will be done putting jobs in the productionslists via this interface.
- The field "Antworttext" indicates the answer-text corresponding to the field "Antwort" which are specified above

- The field "PlattenGruppe" is a additional field witch can be used to select templates

9.1.1Course

- For each board that shall be reserved or for that a reservation shall be withdrawn is written a data set in the table by a superior system. In doing so the status field is set to value 10. The storage control can read out these data setzs and subsequently set the status field to value 20 in order to mark is as processed
- When writing, the field status is set to value 10. When reading, it is set to value 20. After an adjustable time the data sets with value 20 are automatically deleted by the system

10.Interface 9 Scanner connection offcut storage modul

Interface for data transfer for activation of signal lamps to a superior system
The table is in the data base of the storage control
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning"

10.1Details

Table name: Reservierung
Data base: Data base of the storage control lagerdb
Table is written by the storage program

Column name	Datatype	Size	NULL allowed
Id	int	4	No
Identnummer	nvarchar	50	Yes
Material	nvarchar	50	Yes
Dekor	nvarchar	50	Yes
Laenge	int	4	Yes
Breite	int	4	Yes
Dicke	int	4	Yes
Maserung	int	4	Yes
OptiMatParam	nvarchar	50	Yes
OptiBoardParam	nvarchar	50	Yes
OptiFunctionCode	int	4	Yes
Kosten	float	8	Yes
PlatzNr	int	4	Yes
Platzbezeichnung	nvarchar	50	Yes
Status	int	4	Yes
Updatedatum	Datetime	8	Yes
Barcode	nvarchar	50	Yes
MaxPaketHoehe	int	4	Yes
MinBestand	int	4	Yes
BoardsInformation	nvarchar	50	Yes

- "Id" has identity = Ja (ID-Start value = 1;ID-step width = 1). All other columns have standard adjustments. The column "Id" is only used in order to determine the succession when processing several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "Identnummer" indicates the clear board code of the offcut, the ident number of offcuts starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- The field "Maserung" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain

1 grain direction parallelly to board length
2 grain direction parallelly to board width

- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", MaxPaketHoehe,BoardsInformation and MinBestand indicate optimization parameters that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The field "PlatzNr" indicates the position number in the manual storage in which the offcut has been stored
- The field "PlatzBezeichnung" indicates the position name of the manual storing position in which the offcut has been stored
- The field "Status" has the following functions:
  0= Data are just processed
  10=Data are transferred by the writing system
  20=Data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated on each writing access, the setting of the UpdateDatum is done by the DB-Server via an Update and Insert Trigger
- The field "Barcode" contains the Barcode of a board.

10.1.1Course

- Every time an offcut is stored into the manual offcut storage a data set is written in the table. In doing so the status field is set to value 10. A superior system can read-out these data sets and subsequently set the status field to value 20 in order to mark these as processed
- The field Status is set to value 10 when written in. When reading the value is set to 20. After an adjustable time the data sets with the status value 20 are automatically deleted by the system

11.Interface 10 Creation of a removal list

Interface for the creation of an offcut removal list by a superior system
The data base procedure is in the data base of the storage control,
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

11.1Details

SQL-Procedure: BuchEntnahmeListe Lauf,Saege
Data base: Data base of the storage control lagerdb
Function is called-up by a superior system
The procedure has the following parametres:
"Lauf" indicates the optimization run for which a removal list shall be created (Data type nvarchar(50)
"Saege" indicates the saw for which a removal list shall be created (Data type int possible values 1-3)
The procedure returns following datasets

Column name	Datatype	Size
Id	int	4
Identnummer	nvarchar	50
Platznummer	int	4
Lauf	nvarchar	1024
Plan	nvarchar	1024

- The field "Identnummer" indicates the clear board code, the ident number of offcuts starts always with an X
- The field "Platznummer" contains the number of the storage position from which the board shall be removed
  If the field has the value -1, the board could not be found in the storage
- The field "Lauf" indicates the optimization run for that the relevant ident number is reserved
- The field "Plan" indicates the cutting plan for that the relevant ident number is reserved

11.1.1Course

- If boards shall be provided from the manual storage, the procedure BuchEntnahmeliste can be called up for it
  As parameter is transferred the run whose parts shall be provided and the saw for that the parts shall be provided.
  Calling-up the procedure the for the mentioned run reserved parts are booked from the storage positions to a provision carriage and the individual parts are returned with their storage position as data set.
  If these parts shall later be produced, then the provision carriage is shown to the operator as storage place for the provision of the parts for the saw.
  The communication is done by a stored SQL-Procedure that can be called-up at any time in order to book the reserved parts of a mentioned optimization run from the storage position to the provision carriage. The procedure can be called-up several times but the parts are only booked to the provision carriage if they are not yet in it
  Example:

```
Exec lagerdb.dbo.BuchEntnahmeliste 'ABC',1
```

  In the above example is created a removal list for saw 1 for the parts of the optimization run ABC

12.Interface 11 outfeed report

Interface for reporting of outfeedjobs
The table is in the data base of the storage control
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

12.1Details

Table name: Auslagerreport
Data base: Data base of the storage control lagerdb
Table is written by the storage program

Column name	Datatype	Size	NULL allowed
Id	int	4	No
Identnummer	nvarchar	50	Yes
Material	nvarchar	50	Yes
Dekor	nvarchar	50	Yes
Laenge	int	4	Yes
Breite	int	4	Yes
Dicke	int	4	Yes
Maserung	int	4	Yes
OptiMatParam	nvarchar	50	Yes
OptiBoardParam	nvarchar	50	Yes
OptiFunctionCode	int	4	Yes
Kosten	float	8	Yes
Barcode	nvarchar	50	Yes
MaxPaketHoehe	int	4	Yes
MinBestand	int	4	Yes
BoardsInformation	nvarchar	50	Yes
PlatzNr	int	4	Yes
Lauf	nvarchar	1024	Yes
Plan	nvarchar	1024	Yes
Zyklus	int	4	Yes
LageNrImPlan	int	4	Yes
Lieferant	nvarchar	1024	Yes
Bestellpos	nvarchar	1024	Yes
Bestellnr	nvarchar	1024	Yes
Funktion	int	4	Yes
AuslagerID	nvarchar	50	Yes
Anlieferdatum	datetime	8	Yes
Einlagerdatum	datetime	8	Yes
Status	int	4	Yes
Updatedatum	Datetime	8	Yes

- "Id" has identity = Ja (ID-Start value = 1;ID-step width = 1). All other columns have standard adjustments. The column "Id" is only used in order to determine the succession when processing several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "Identnummer" indicates the clear board code of the offcut, the ident number of offcuts starts always with an X
- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- "The field ""Maserung"" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain
  1 grain direction parallelly to board length
  2 grain direction parallelly to board width"
- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", MaxPaketHoehe,BoardsInformation and MinBestand indicate optimization parameters that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The field "Barcode" contains the Barcode of a board.
- The field "PlatzNr" indicates the position number of the outfeedplace to which the panel has been outfeeded
- The field "Lauf" indicates the optimizing run for which the relevant ident number is outfeeded
- The field "Plan" indicates the cutting plan for which the relevant ident number is outfeeded
- The field "Zyklus" indicates the cutting cycle for which the panel was outfeeded (this field is only used at machines with a labelingstation)
- The field "LageNrImPlan" indicates the layer in a book for which the panel was outfeeded (this field is only used at machines with a labelingstation)
- The fields "Lieferant", "Bestellpos" and "Bestellnr" indicate the supplier data that have been entered while storing of the board by the operator
- The field "Funktion" indicate the type of report
  0= Normal report of a outfeededpanel
  1= outfeedjob was deleted by the operator
  2= outfeedjob could not be processed and was marked as error
  3= error marked outfeedjob was reactivated by the operator
- The field "AuslagerID" indicate a unique Identifier of the outfeed job, this ID could be used to reference the raw panel to the single cutted parts behind a saw
- The fields "Anlieferdatum" and "Einlagerdatum" indicate the delivery resp. the storing date of the board
- The field "Status" has the following functions:
  0= Data are just processed
  10=Data are transferred by the writing system
  20=Data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated on each writing access, the setting of the UpdateDatum is done by the DB-Server via an Update and Insert Trigger

12.1.1Course

- Every time a panel is outfeeded to an outfeedplace a dataset is written in the table. In doing so the status field is set to value 10. A superior system can read-out these data sets and subsequently set the status field to value 20 in order to mark these as processed
- The field Status is set to value 10 when written in. When reading the value is set to 20.

- After an adjustable time the data sets with the status value 20 are automatically deleted by the system, after a very large time (i.e. 3 month) the data sets with the status value 10 are automatically deleted by the system,

13.Interface 12 Infeed report

Interface for feedback of infeed jobs to a superior system
The table is in the data base of the storage controlDie Tabelle liegt in der Datenbank der Lagersteuerung
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

13.1Details

Table name: Einlagerreport
Data base: Data base of the storage control lagerdb
Table is written by the storage program

Column name	Datatype	Size	NULL allowed
Id	int	4	No
Identnummer	nvarchar	50	Yes
Material	nvarchar	50	Yes
Dekor	nvarchar	50	Yes
Laenge	int	4	Yes
Breite	int	4	Yes
Dicke	int	4	Yes
Maserung	int	4	Yes
OptiMatParam	nvarchar	50	Yes
OptiBoardParam	nvarchar	50	Yes
OptiFunctionCode	int	4	Yes
Kosten	float	8	Yes
Barcode	nvarchar	50	Yes
MaxPaketHoehe	int	4	Yes
MinBestand	int	4	Yes
BoardsInformation	nvarchar	50	Yes
PlatzNr	int	4	Yes
Lieferant	nvarchar	1024	Yes
Bestellpos	nvarchar	1024	Yes
Bestellnr	nvarchar	1024	Yes
Anlieferdatum	datetime	8	Yes
Einlagerdatum	datetime	8	Yes
Status	int	4	Yes
Updatedatum	Datetime	8	Yes

- "Id" has identity = Ja (ID-Start value = 1;ID-step width = 1). All other columns have standard adjustments. The column "Id" is only used in order to determine the succession when processing several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "Identnummer" indicates the clear board code of the infeeded panel
- The fields "Material" and "Dekor" contain the material code and the decor of the board

- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- "The field ""Maserung"" indicates the grain direction of the relevant ident number. It may have the following values:
  0 no grain
  1 grain direction parallelly to board length
  2 grain direction parallelly to board width
- The fields "OptiMatParam", "OptiBoardParam","OptiFunctionCode", MaxPaketHoehe,BoardsInformation and MinBestand indicate optimization parameters that can be allocated to the relevant ident number.
- The field "Kosten" indicates the costs per m² for the relevant ident number
- The field "PlatzNr" indicates the number of the infeedplace from which the panel has been infeeded
- The field "Barcode" contains the Barcode of a board.
- The fields "Lieferant", "Bestellpos" and "Bestellnr" indicate the supplier data that have been entered while storing of the board by the operator
- The fields "Anlieferdatum" and "Einlagerdatum" indicate the delivery resp. the storing date of the board
- The field "Status" has the following functions:
  0= Data are just processed
  10=Data are transferred by the writing system
  20=Data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated on each writing access, the setting of the UpdateDatum is done by the DB-Server via an Update and Insert Trigger

13.1.1Course

- Every time a panel is infeeded from an infeedplace a dataset is written in the table. In doing so the status field is set to value 10. A superior system can read-out these data sets and subsequently set the status field to value 20 in order to mark these as processed
  Notice:
  an infeed report is generated if a panel is infeeded from an infeedplace by the machine and also if a panel was booked into a manual storage by using interface 5
- The field Status is set to value 10 when written in. When reading the value is set to 20.
- After an adjustable time the data sets with the status value 20 are automatically deleted by the system, after a very large time (i.e. 3 month) the data sets with the status value 10 are automatically deleted by the system

14.Interface 13 Infeed Stack data

Interface for transfer of stacks for infeed jobs
The table is in the data base of the storage control
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

14.1Details

Table name: free adjustable tablename, could be defined separatly for each infeedplace
Data base: Data base of the storage control lagerdb
Table is written by a superior system

Column name	Datatype	Size	NULL allowed
Id	int	4	No
StapelId	nvarchar	50	Yes
Lage	Int	4	Yes
Identnummer	nvarchar	50	Yes
Laenge	int	4	Yes
Breite	int	4	Yes
Dicke	int	4	Yes
Maserung	int	4	Yes
Material	nvarchar	50	Yes
Dekor	nvarchar	50	Yes
Lauf	nvarchar	1024	Yes
Plan	nvarchar	1024	Yes
Auftragsnr	Nvarchar	1024	Yes
Anlieferdatum	Datetime	8	Yes
Einlagerdatum	Datetime	8	Yes
Lieferant	nvarchar	1024	Yes
Bestellpos	Nvarchar	1024	Yes
Bestellnr	Nvarchar	1024	Yes
Platznummer	int	4	Yes
PlatzInfo	Nvarchar	50	Yes
Typ	int	4	Yes
Status	int	4	Yes
Updatedatum	Datetime	8	Yes
AnzahlProPaket	Int	4	Yes
ErrorCode	Int	4	Yes
ErrorText	Nvarchar	1024	Yes

- "Id" has identity = Ja (ID-Start value = 1;ID-step width = 1). All other columns have standard adjustments. The column "Id" is only used in order to determine the succession when processing several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "Stackid" indicates a unique identifier of the stack that should be infeeded, all panels in a stack have the same StackId

- The field "Lage" indicates the layer of a board in a stack. The bottommost layer in a stack has the value 1
- The field "Identnummer" indicates the clear board code of the offcut, the ident number of offcuts starts always with an X
- The fields "Laenge", "Breite" and "Dicke" contain the dimensions of the board in 1/10mm
- The field "Maserung" indicates the grain direction of the relevant ident number. It may have the following values:
  - 0 no grain
  - 1 grain direction parallelly to board length
  - 2 grain direction parallelly to board width
- The fields "Material" and "Dekor" contain the material code and the decor of the board
- The field "Lauf" indicates the optimizing run for which the relevant identnumber should be processed, could be empty if the stack is just for infeed
- The field "Plan" indicates the cutting plan for which the relevant identnumber should be processed, could be empty if the stack is just for infeed
- The field "Auftragsnr" indicates the orderid of a panel in a stack (just for comments)
- The fields "Anlieferdatum" and "Einlagerdatum" indicate the delivery resp. the storing date of the board
- The fields "Lieferant", "Bestellpos" and "Bestellnr" indicate the supplier data that have been entered while storing of the board by the operator
- The field "PlatzNummer" indicates the position number of the outfeedplace to which the stack has been outfeeded (values 11 to 19), the value 9 indicates a "virtual panel". This is a panel that isn't physical located in the stack, this panel has to be moved manually from the manual storage into the specified layer in the stack, for stack that are just for infeed, the field shoudl have the value 11
- The field "PlatzInfo" indicates the storage location in a manual storage of a "virtual panel", if a panel has to be moved from a manual storage into the stack
- The field "typ" indicates the type of the board. It can have the following values:
  - 0 = the board is a standard board normally processed on further woodworking machines
  - 1 = the board is a based board (bottommost board in a stack)
- The field "Status" has the following functions:
  - 0= Data are just processed
  - 10=Data are transferred by the writing system
  - 20=Data have been read
- The field "Updatedatum" contains the date and the time of the last writing access, it is updated on each writing access, the setting of the UpdateDatum is done by the DB-Server via an Update and Insert Trigger
- The field "AnzahlProPaket" indicate the count of panels per book for a cutting cycle of the book of panels in the outfeeded stack
- The field "ErrorCode" and "ErrorText"indicate an unique Errorcode and an Errortext if the import of the the stack failed. In this case the same
  ErrorCode and ErrorText will be written for all panels in a stack. If the stack is imported successfully the Errorcode is set to 0 for all panels of a stack

14.1.1Course

- This Interface can only be used to prevent the operator from entering the stack on the infeedplace manually, it could not used to book stacks to or from a manual storage
- Notice:
  Every time a stack is moved into a the infeed palace of the machine a dataset of a complete stack is written in the table by an external system. In doing so the status field is set to va-

lue 10. The storage control can read out these data sets and subsequently set the status field to value 20 in order to mark it as processed

- The field Status is set to value 10 when written in. When reading the value is set to 20. After an adjustable time the data sets with the status value 20 are automatically deleted by the system

15.Interface 14 Outfeed jobs

Interface for transfer of outfeed jobs
The table is in the data base of the storage control
A MS SQL Server 2000 (MSDE) is used, it is installed in the PC of the storage control during the commissioning

15.1Details

Table name: free adjustable tablename, could be defined separatly for each outfeedplace
Data base: Data base of the storage control lagerdb
Table is written by a superior system

Column name	Datatype	Size	NULL allowed
Id	bigint	4	No
InOutState	int	4	No
Updatedate	Datetime	8	Yes
InsertDate	Datetime	8	Yes
In_Run	nvarchar	50	No
In_Pattern	nvarchar	50	No
In_Boardcode	nvarchar	50	No
In_Materialcode	nvarchar	50	No
In_Length	int	4	No
In_Width	int	4	No
In_Thickness	int	4	No
In_Quickorder	int	4	No
In_PatternTotal	int	4	No
In_BookTotal	int	4	No
In_CutCyle	int	4	No
In_LayerNo	int	4	No
In_OrientationSuggestion	int	4	No
In_NumberOfLabels	int	4	No
In_LabelOrderId	nvarchar	1024	No
In_SourceLocation	int	4	No
In_PartsList	nvarchar	255	No
In_BoardsList	nvarchar	255	No
In_CyleTimeInSeconds	int	4	No
In_OptimizedParameterList	nvarchar	255	No
In_SawParameterList	nvarchar	255	No

- Here "Id" has identity = Ja (ID-Start value = 1;ID-step width = 1). All other columns have standard adjustments. The column "Id" is only used for determination of the succession when several orders, it is not written by the writing system but is an "Autowert-Feld" of the data base.
- The field "InOutState" has the following functions:
  0= Data are just in process

10=Data are transferred by the writing system
20=Data have been read

- The field "Updatedate" contains the date and the time of the last writing access, it is updated at every writing access, the UpdateDatum is set by the DB-Server via an Update Trigger
- The field "Insertdate" contains the date and the time of the creation of the dataset
- The field "In_Run" indicates the optimization run for which the relevant ident hast o be outfed
- The field "In_Pattern" indicates the cutting plan for which the relevant ident number has to be outfed
- The field "In_Boardcode" indicates the clear board code, the ident number of panel that hast o be outfed
- The fields "In_Materialcode" contain the material code of the board
- The fields "In_Length", "In_Width" and "In_thickness" contain the dimensions of the board in 1/10mm
- The field "In_QuickOrder" indicates with value 1 a quickorder job. All board of a optimization run should have the same value at „In_Quickorder“
- The field "In_PatternTotal" contain the total count of boards in the cutting pattern
- The field "In_BookTotal" contain the total count of boards in a cutting cycle
- The field "In_CutCycle" contain the actual cutting cycle of a cutting pattern. The first cycle starts with the value 1
- The field "In_LayerNo" contain the layer number of a board in a book. This parameter will only be used at automatic labeling stations and should be set to 1 as a default value
- The field "In_OrientationSuggestion" contain the orientation of the outfeeded boards.The parameter can have one of the following values:
  0 = board will be outfed in a unturned orientation
  1 = board will be outfed in a turned orientation
- The field "In_NumberofLabels" indicates the number of labels on a board. This parameter will only be used at automatic labeling stations and should be set to 1 as a default value
- The field "In_LabelOrderId" indicates the order-id of labels on a board. This parameter will only be used at automatic labeling stations and should be set to blank as a default value
- The field "In_SourceLocation" contain the infeed direction into the saw for the outfeed boards. The parameter can have one of the following values:
  0 = board will be moved into the saw by the storage machine
  99 = board will be moved into the saw by the operator frontwise
  For default the parameter must be set to 0
- The fields "In_PartsList","In_BoardsList","In_OptimizedParametersList“ and „In_SawparameterList“ indicates the name of internal lists. This parameters will only be used at automatic labeling stations and should be set to blank as a default value
- The field "In_CycleTimeInSeconds“ indicates the cutting time of cutting one book in the saw in seconds. If this parameter is not available it should be set to 0 as a default value

15.1.2Course

- For each each book of panels that should be outfed in a optimization run a dataset should be written in the table by a superior system
- In doing so the status field „InOutState“ set to value 10. The storage control can read out these data sets and subsequently set the status field „InOutState“to value 20 in order to mark is as processed
- Notice: The status field „InOutState“ of one optimzation run should be set to value 10 for all books/boards in the optimization run in one sql transaction with one sql command (do not use sql transaction, see example in chapter 3.1.1)
- When writing, the field „InOutState“ is set to value 10. When reading, it is set to value 20. After an adjustable time the data sets with value 20 are automatically deleted by the system