

Process Control by "AIQ Ver. 11"
Introduction of the new version

The first step to IoT with "AIQ" powered by CAD/CAM Developer!
Smart Management of Mold/Die/Part Manufacturing



CGS ASIA CO., LTD.

AIQ V11

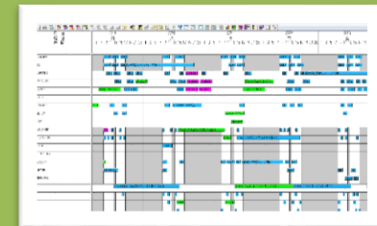
What is "AIQ"?

Ideal for entry model of IoT!

Order Management



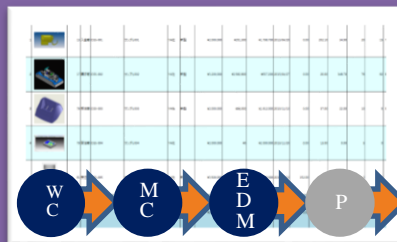
Plan Management



AIQ

Activity for Industrial Quality

Progress Management



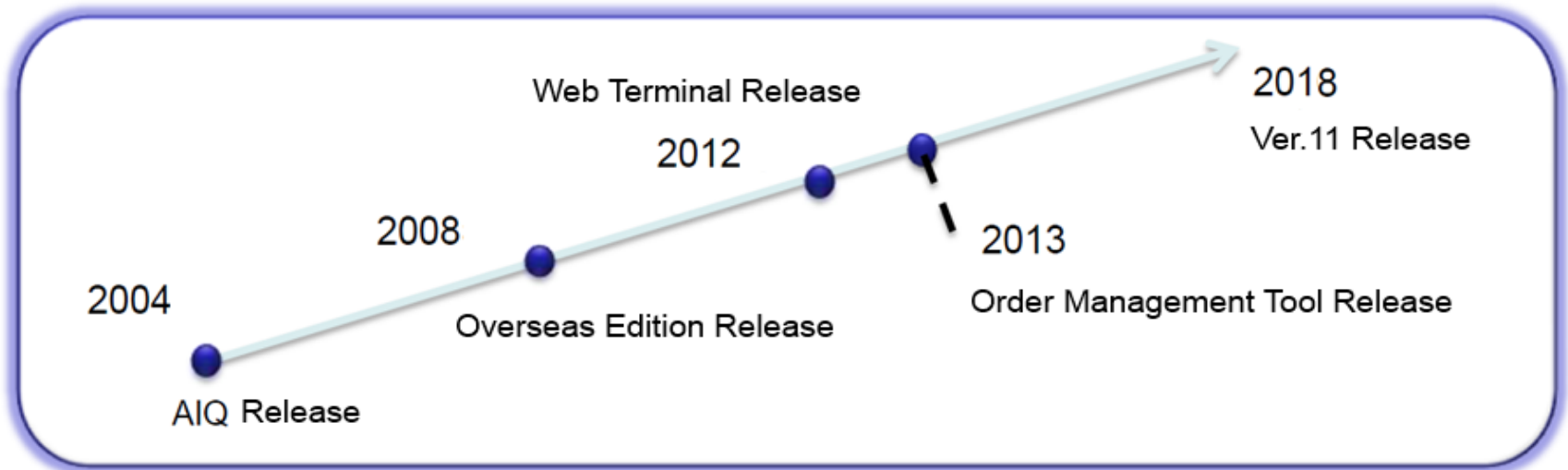
Result Collection



AIQ V11

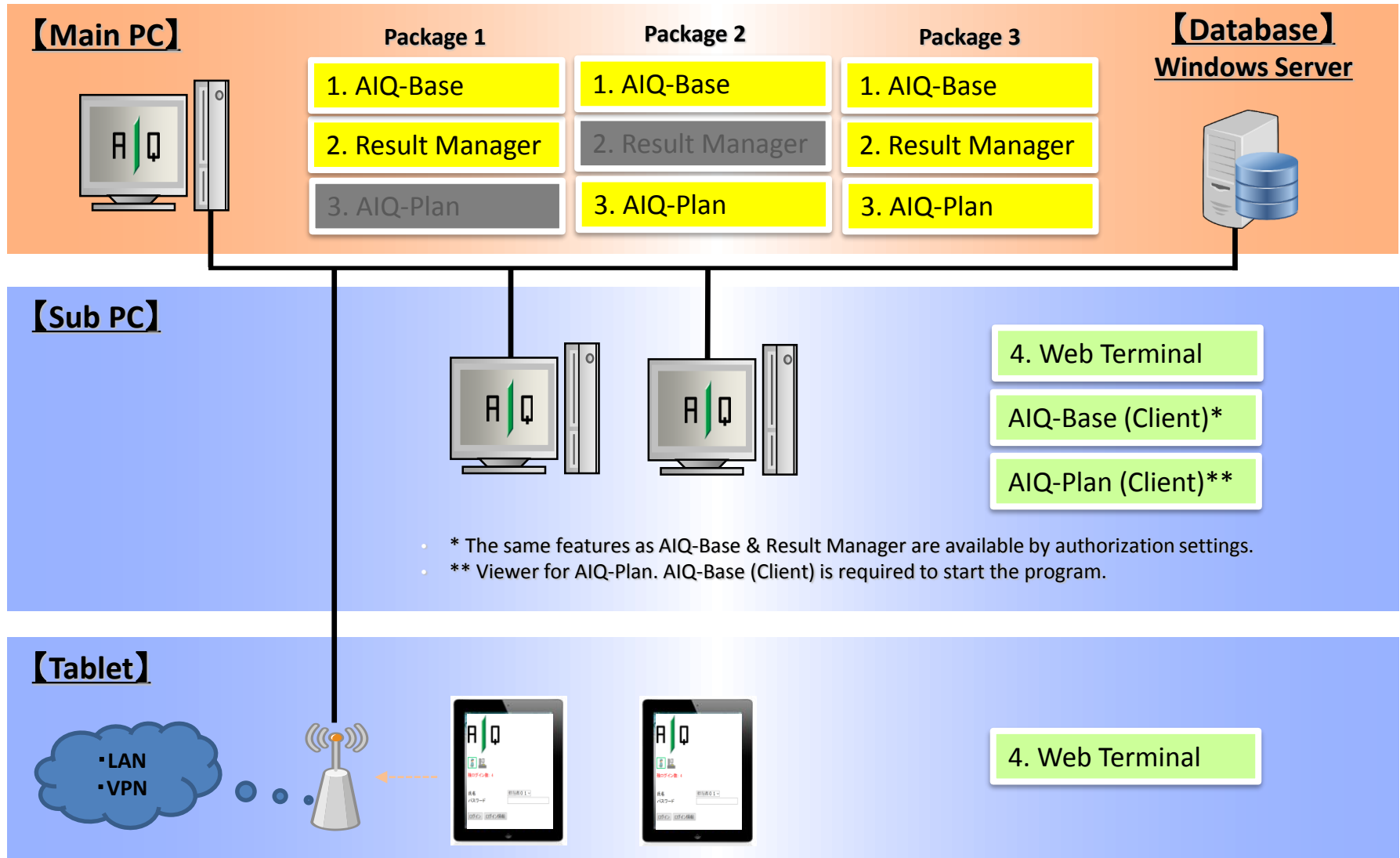
What is "AIQ"?

- Focus on the management of “Plan, Result and Cost” in Mold/Die/Part Manufacturing.
- Co-develop with Hitachi ULSI Systems Co., Ltd.
- Enhance every year by improving and adding new functions.



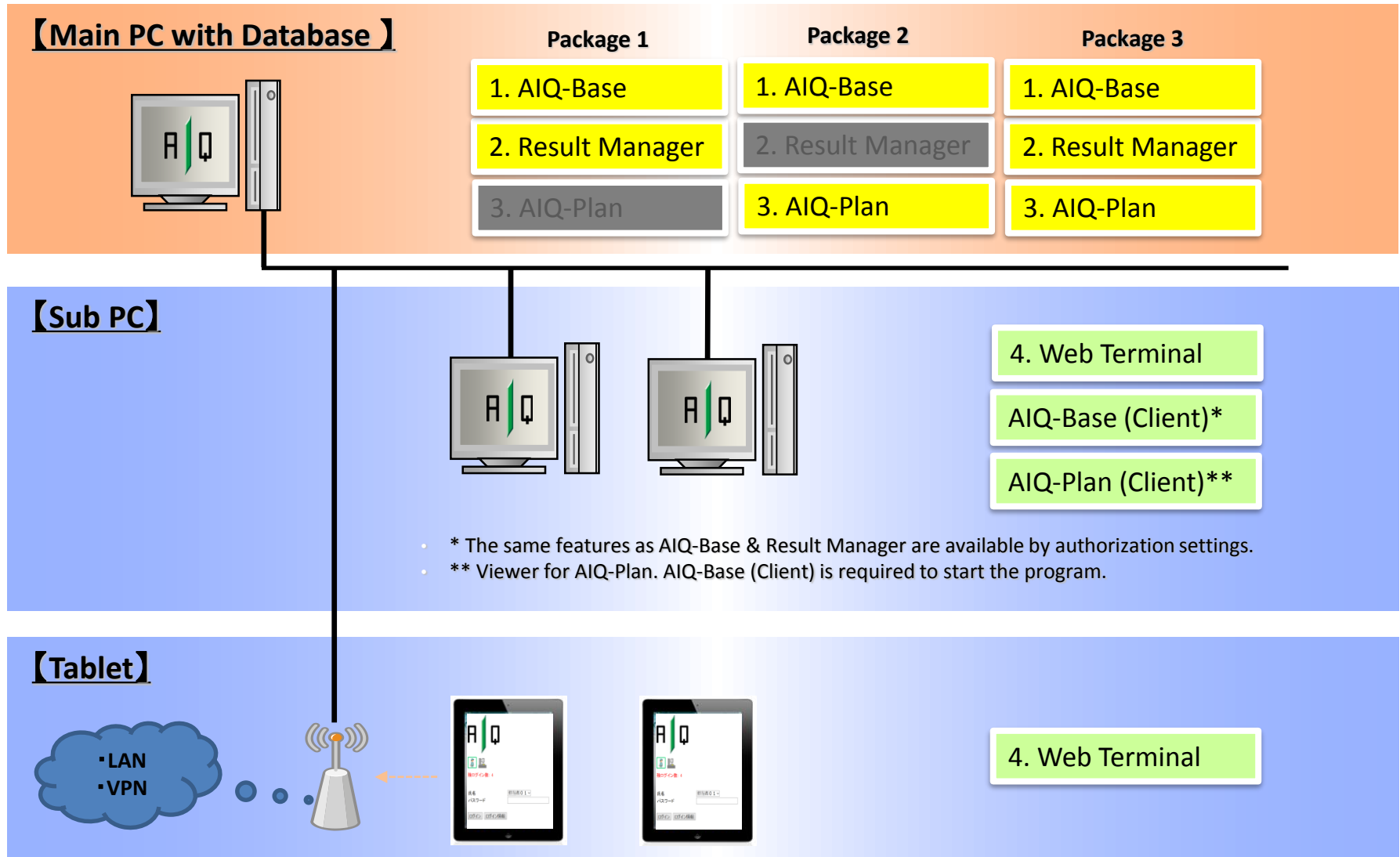
AIQ V11

For 24-hour use



AIQ V11

For non-24-hour use



AIQ V11

1. AIQ-Base

Order / Part / Process Registration

Order Information

Product information

☐ Provisional Order

Product information

*Registration Date 2/1/2014

Received Order No.

Quote author PIC-01

Sales PIC-02

Designer PIC-03

Production chief PIC-04

Try out operator PIC-05

Received Order Date 4/6/2018

Estimate Issued Date Select a date

Purchase Order Receipt Date Select a date



Part List

	Part No.	Part Name	Priority	Weight	Material	X	Y	Z	Quantity	Part Type
1	001	Design	E	0.00	...	0.00	0.00	0.00	1	Design
2	10	P-H	E	0.00	...	0.00	0.00	0.00	1	Plate
3	20	P-B	E	0.00	...	0.00	0.00	0.00	1	Plate
4	30	P-P	E	0.00	...	0.00	0.00	0.00	1	Plate
5	40	P-B	E	0.00	...	0.00	0.00	0.00	1	Plate
6	50	S-P	E	0.00	...	0.00	0.00	0.00	1	Plate

Process Design

Part Process Information									
Part Information	Schedule	Result	Process1	Process2	Process3	Process4	Process5	Process6	
Part No. : 001 Part Name : Design	19.00H ¥83,600	0.00H ¥0	[CAD]CAD (Plan)16.00H (Result)0.00H	[CAM]CAM (Plan)3.00H (Result)0.00H					
Part No. : 10 Part Name : P-H	15.50H ¥68,200	0.00H ¥0	[SGR] (Plan)3.00H (Result)0.00H	[MILL] (Plan)4.00H (Result)0.00H	[MCBE] (Plan)0.50H (Result)0.00H	[MC] (Plan)4.00H (Result)0.00H	[FGR] (Plan)4.00H (Result)0.00H		
Part No. : 20 Part Name : P-B	19.00H ¥83,600	0.00H ¥0	[SGR] (Plan)3.00H (Result)0.00H	[MCBE] (Plan)0.50H (Result)0.00H	[MC] (Plan)4.00H (Result)0.00H	[WCBE] (Plan)0.50H (Result)0.00H	[WC] (Plan)8.00H (Result)0.00H	[FGR] (Plan)3.00H (Result)0.00H	
Part No. : 30 Part Name : P-P	45.50H ¥94,600	0.00H ¥0	[MCBE] (Plan)0.50H (Result)0.00H	[MC] (Plan)5.00H (Result)0.00H	[HEAT]HEAT (Plan)1.00D (Result)0.00D	[WCBE] (Plan)1.00H (Result)0.00H	[WC] (Plan)10.00H (Result)0.00H	[EDM] (Plan)5.00H (Result)0.00H	

AIQ V11

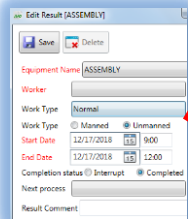
1. AIQ-Base

Result Collection

Accumulate results



Accurate process planning



AIQ-Base



Web Terminal

Part Process Information									
<div>Part Information Schedule Result Process1 Process2 Process3 Process4 Process5 Process6</div>									
Part No. : 001 Part Name : 設計	10.00H ¥44,000	9.50H ¥85,500	[CAD]CAD (Plan)8.00H (Result)8.00H	[CAM]CAM (Plan)2.00H (Result)1.50H					
Part No. : 10 Part Name : パンチ刺タ	9.50H ¥41,800	9.00H ¥37,750	[SGR] (Plan)1.00H (Result)1.00H	[MCBE] (Plan)0.50H (Result)0.50H	[MC] (Plan)4.00H (Result)4.00H	[FGR] (Plan)4.00H (Result)3.50H			
Part No. : 20 Part Name : パンチバタキング	17.00H ¥74,800	16.00H ¥37,300	[MCBE] (Plan)0.50H (Result)0.50H	[MC] (Plan)5.00H (Result)5.00H	[WCBE] (Plan)0.50H (Result)0.50H	[WC] (Plan)8.00H (Result)7.00H	[FGR] (Plan)3.00H (Result)3.00H		
Part No. : 30 Part Name : パンチアレート	41.00H ¥74,800	43.00H ¥50,150	[MCBE] (Plan)0.50H (Result)0.50H	[MC] (Plan)4.00H (Result)5.00H	[HEAT]HEAT (Plan)1.00D (Result)1.00D	[WCBE] (Plan)0.50H (Result)0.50H	[WC] (Plan)8.00H (Result)8.00H	[EDM] (Plan)4.00H (Result)5.00H	
Part No. : 40 Part Name : ストリッパバタキング	22.00H ¥96,800	21.00H ¥71,600	[SGR] (Plan)4.00H (Result)3.00H	[MCBE] (Plan)0.50H (Result)0.50H	[MC] (Plan)5.00H (Result)5.00H	[WCBE] (Plan)0.50H (Result)0.50H	[WC] (Plan)8.00H (Result)8.00H	[FGR] (Plan)4.00H (Result)4.00H	

Result Information							
Equipment Name	Worker	Start Date	End Date	Processing Time	Work Type	Completion status	Result Comment
1 MC01	ST-11	1/6/2012 09:45	1/6/2012 14:45	5.00	Unmanned	Completed	

AIQ V11

2. Result Manager

Order / Quotation from History

Order Search

Received Order No. 123

*Product No. P-0000

*Product Name 7*1/2-0000

Manufacturing Type Die

Estimated amount

Unit Price Japanese Yen ¥1,500,000

Quantity 1

Contract amount ¥1,500,000

Customer Information

*Customer Client-A

Contact Person CGS

Customer Due Date Example Company Inc.

Delivery Method 596 High Ridge St.

Progression List

No.	Product Image	Management No.	Product No.	Product Name	Registration Date	Status	Quote author	Sales	Designer	Production chief	Try out operator
1											
2		2	P-0001	7*1/2-0001	4/1/2014	Before Acceptance Inspection	Leader-01	Leader-02	Leader-03	Leader-04	Leader-05
3		3	D-0001	7*E-0001	2/1/2014	Before Billing		Leader-02	Leader-03	Leader-04	Leader-05
4		4	P-0003	7*1/2-0003							

Create a quotation

Quote no. 123 Customer no. 456 Date 8.29.17

Dear Sir,

Thank you

Item	Description	Unit	Price	Amount
1	License plate frame	10 pc	\$5.00	\$50.00
2	Ballpoint pen			

Item total \$200.00

Sales tax @ 9% \$18.00

TOTAL due \$218.00

Create a new order with Planned/Actual Processing Time

Management No.1Specify the copy conditions of

Copy Target

☐ Only Product Information

☒ Product Information and Part Inform

☐ Only Part Information

Apply Processing Time

☐ Apply Planned Processing Time

☒ Apply Result Processing Time

Copy Attribute(Product Information)

☒ Received Order No. ☒ Provisional Order ☒ Registration Date

☒ Sales ☒ Designer ☒ Production chief

☒ Received Order Date ☒ Estimate Issued Date ☒ Purchase Order Receipt

☒ Product Name ☒ Manufacturing Type ☒ Estimated amount

☒ Customer ☒ Contact Person of Customer ☒ Customer Due Date

☒ Delivery Destination ☒ Check No. ☒ Manufacture No.

☒ Machining Type ☒ Manufacture Due Date ☒ Standard/Size

☒ Storage Space ☒ Remarks

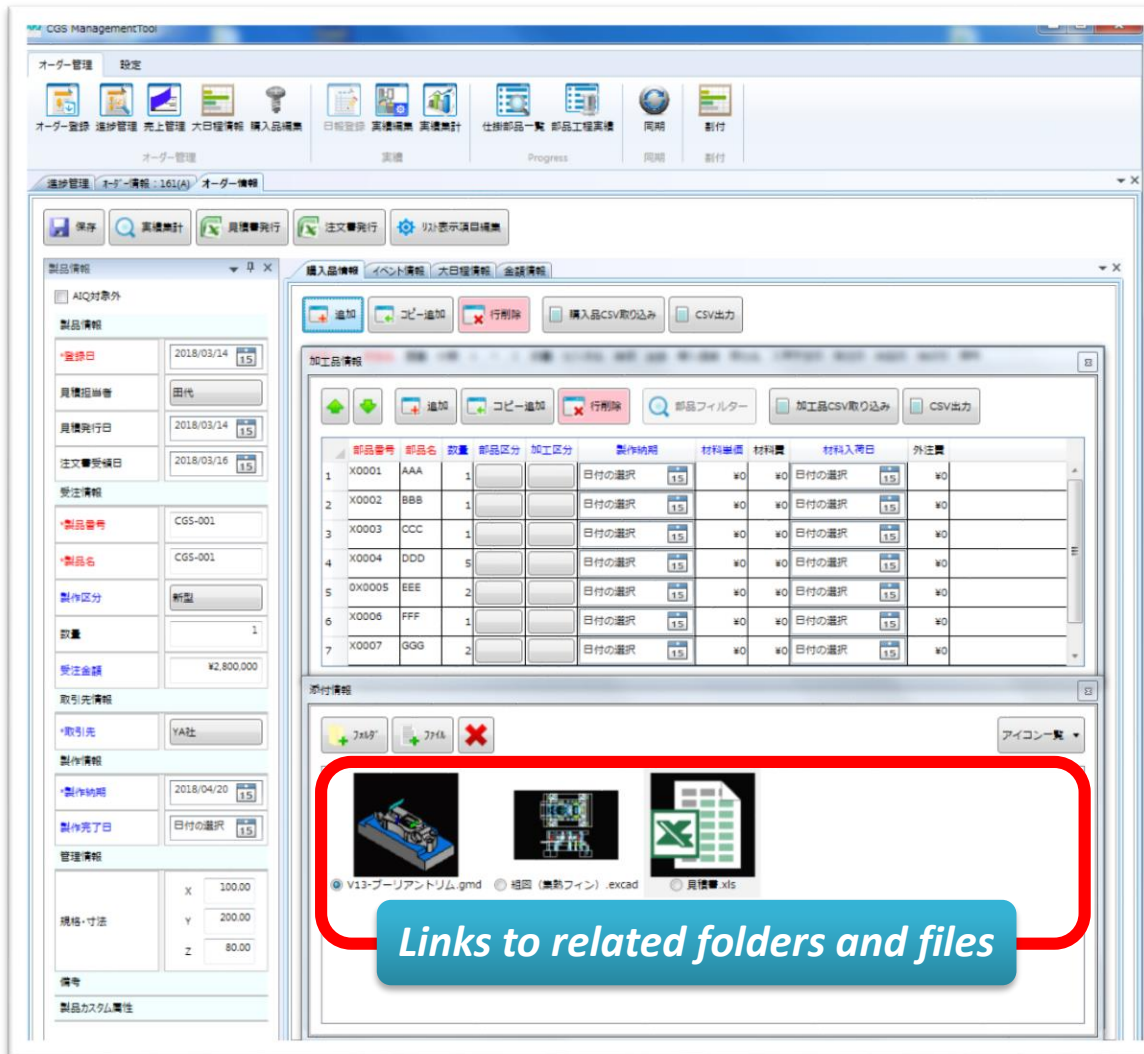
Select a similar order from history


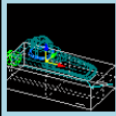


Calculate the profit by cost master settings

AIQ V11

2. Result Manager

File Management



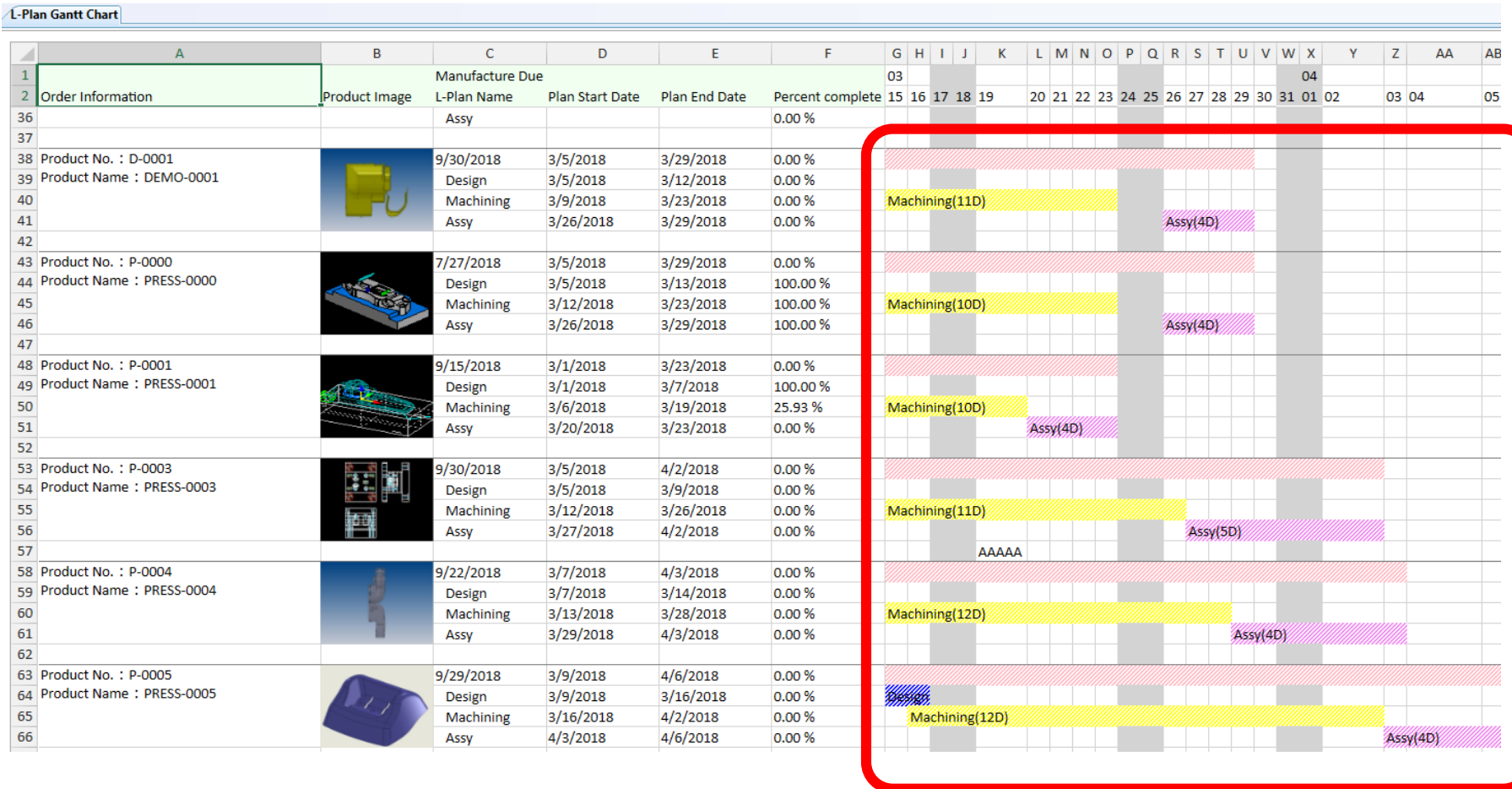
Progression List			
	Product Image	Management No.	Product No. Pro
1		1 P-0000	ア*レ
2		2 P-0001	ア*レ
3		3 D-0001	ア*モ
4		4 P-0003	ア*レ

Picture image in the order list

Links to related folders and files

2. Result Manager

Large Term Plan



2. Result Manager

Sales Management

Management

Before Receiving Order

Before Shipment

Before Acceptance Inspection

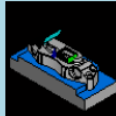
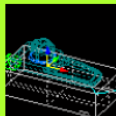




Before Billing

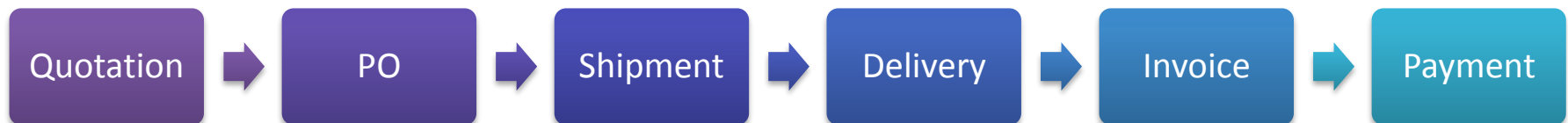
Before Paying

Paid

Show All

Status by color scheme

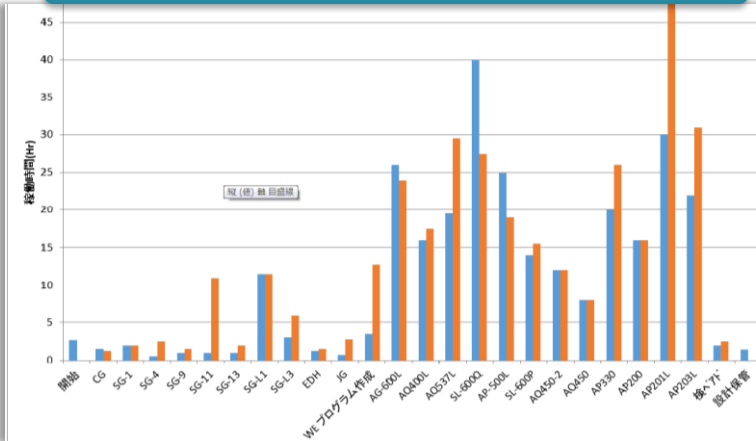
No.	Product Image	Management No.	Product No.	Product Name	Registration Date	Status	Quote author	Sales	Designer	Production chief	Try out operator	Received Order No.	Manufa
1			1 P-0000	PRESS-0000	12/19/2011	Before Shipment							
2			2 P-0001	PRESS-0001	4/1/2014	Before Acceptance Inspection	PIC-01	PIC-02	PIC-03	PIC-04	PIC-05		
3			3 D-0001	DEMO-0001	2/1/2014	Before Billing	PIC-01	PIC-02	PIC-03	PIC-04	PIC-05		
4			4 P-0003	PRESS-0003	2/1/2014	Before Paying	PIC-01	PIC-02	PIC-03	PIC-04	PIC-05		
5			5 P-0004	PRESS-0004	2/1/2014	Before Shipment	PIC-01	PIC-02	PIC-03	PIC-04	PIC-05		
6			6 P-0005	PRESS-0005	2/1/2014	Before Receiving Order							



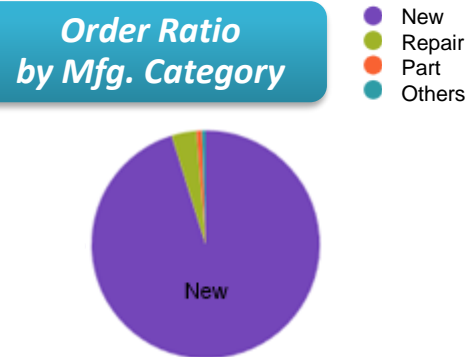
2. Result Manager

Result Totaling

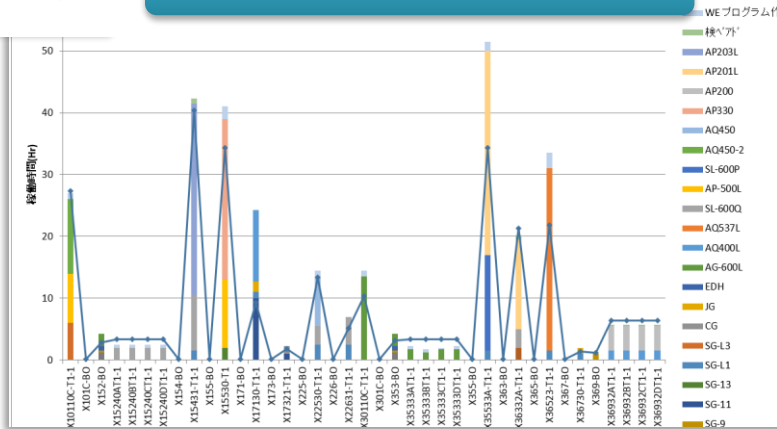
Comparison between Plan & Result



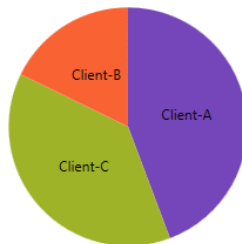
Order Ratio by Mfg. Category



Operation Hour & Ratio



Order Ratio by Customer



Example

Comparison Plan vs Result

Order Ratio by Client

Order Ratio by Mfg. Category

Operation Ratio

Search Conditions

Search Conditions

Clear

Management No.

*

Contract amount

~

Quote author

*

Sales

*

Designer

*

Production chief

*

Try out operator

*

Received Order No.

*

Manufacture No.

*

Product No.

*

Product Name

*

Customer

*

Delivery Method

*

Manufacturing Type

*

Arrangement Type

*

Machining Type

*

Priority

*

Warning Area

*

Worker Group

*

Remarks1

*

Remarks2

*

☒ AIQ ☐ Target ☒ Out of Target

Registration Date

Select a date

15

~

Select a date

15

Customer Due Date

Select a date

15

~

Select a date

15

Estimate Issued Date

Select a date

15

~

Select a date

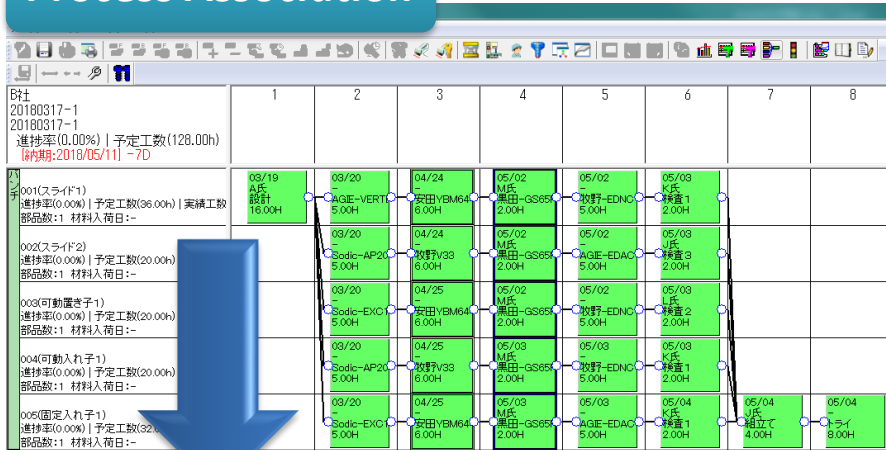
15

AIQ V11

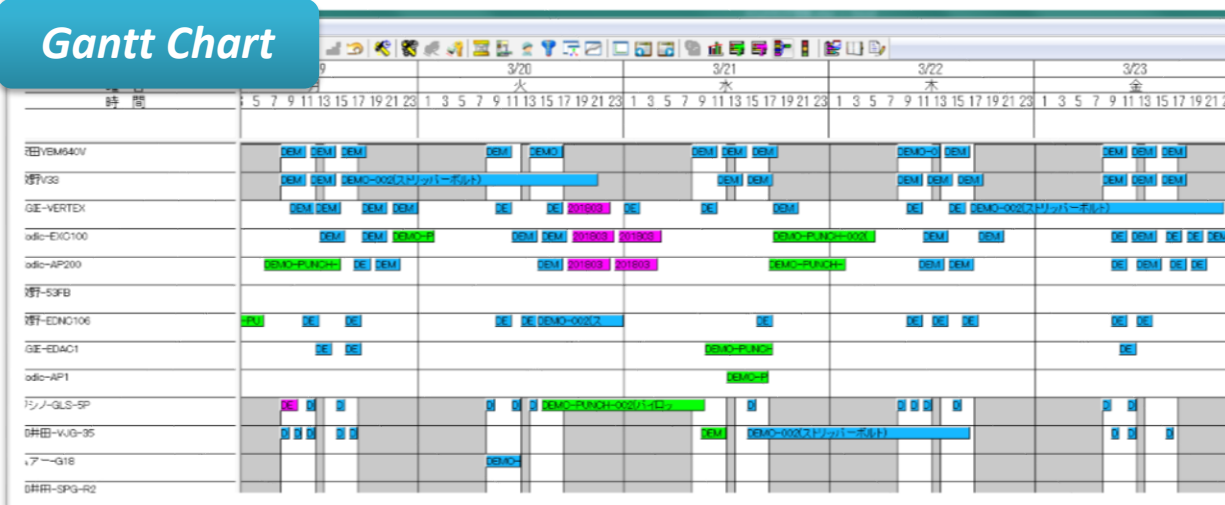
3. AIQ-Plan

Scheduling

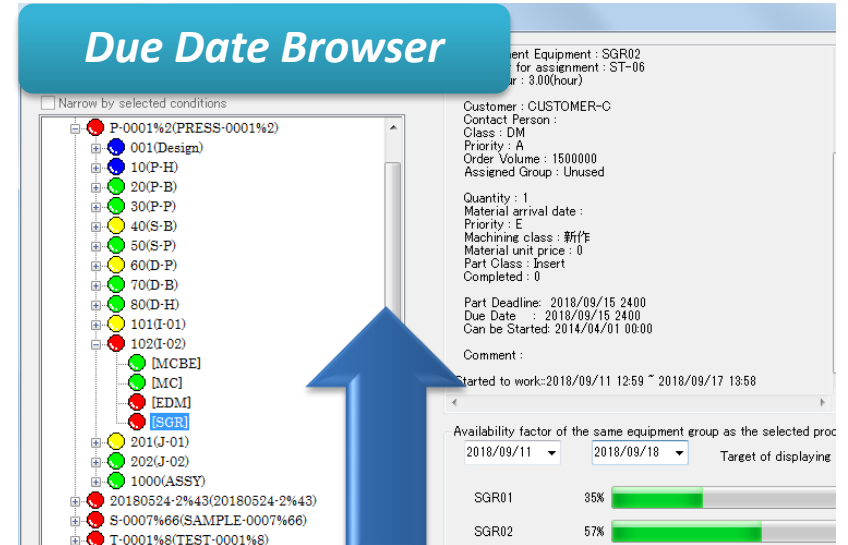
Process Association



Gantt Chart



Due Date Browser



3. AIQ-Plan

Lead Time Check

Due Date Browser

Select die No. *

☐ Display only the deadline over

☐ Narrow by selected conditions

DEMOS-002(金型-002)

DEMO-PUNCH-002(パンチ-002)

DEMO-003(金型-003)

DEMO-004(金型-004)

X00110(ダイセット(上))

X00210(ダイセット(下))

X00640(エンドブロック(上))

X00740(エンドブロック(下))

X02740(位置決めブロック)

X02840(プレート)

X10110B(パンチプレート)

X10210B(パンチバックキングプレート)

X10340(パイロットパンチ)

X10440(シム)

X10540(センター予備抜きパンチ)

X10930(センター抜きパンチ)

X11330(ネッキングパンチ)

X11530(トリミングパンチ)

[マシニング]

[PG]

[放電]

[ワイヤーカット]

[検査]

[治具研]

[ワイヤーカット]

[焼き]

[平面研削]

[検査]

X11740(板押え)

X11840(高さ調整シム)

Description of

Order Code : TEST-0004%11(テスト-0004%11)

Part No. : 001(設計)

Customer : CUSTOMER-B

Contact Person :

Class : Other

Priority : E

Order Volume : 550000

Assigned Group : Unused

Quantity : 1

Material arrival date :

Priority : E

Machining class : 新作

Material unit price : 0

Part Class : Design

Due Date : 2018/06/28 2400

Can be Started: 2014/02/01 00:00

In Time

Almost Overdue

Overdue

Due Date Browser [TEST-0004%11 001]

Select die No. *

☐ Display only the deadline over

☐ Narrow by selected conditions

DEMOS-002(金型-002)

DEMO-PUNCH-002(パンチ-002)

DEMO-003(金型-003)

DEMO-004(金型-004)

X00110(ダイセット(上))

X00210(ダイセット(下))

X00640(エンドブロック(上))

X00740(エンドブロック(下))

X02740(位置決めブロック)

X02840(プレート)

X10110B(パンチプレート)

X10210B(パンチバックキングプレート)

X10340(パイロットパンチ)

X10440(シム)

X10540(センター予備抜きパンチ)

X10930(センター抜きパンチ)

X11330(ネッキングパンチ)

X11530(トリミングパンチ)

[マシニング]

[PG]

[放電]

[ワイヤーカット]

[検査]

[治具研]

[ワイヤーカット]

[焼き]

[平面研削]

[検査]

X11740(板押え)

X11840(高さ調整シム)

AIQ V11

3. AIQ-Plan

Simulation by Overtime / Pause Settings

Overtime Work Settings

Equipment			Worker		
Equipment Name	Equipment Group	Operation Pattern	Employee No.	Name	Operation Pattern
CAD	CAD	08-17	1000	ST-00	08-17 08:00 - 17:00
CAM	CAM	08-17	1001	ST-01	08-17 08:00 - 17:00
EDM01	EDM	08-17	1002	ST-02	08-17 08:00 - 17:00
EDM02	EDM	08-17	1003	ST-03	08-17 08:00 - 17:00
MILL01	MILL	08-17	1004	ST-04	08-17 08:00 - 17:00
MILL02	MILL	08-17	10051	ST-051	08-17 08:00 - 17:00
SUB01	SUB	24	10052	ST-052	20-05 00:00 - 24:00
SUB02	SUB	24	1006	ST-06	08-17 08:00 - 17:00
FGR01	FGR	24	1007	ST-07	08-17 08:00 - 17:00

Period

Period: 2018/09/11 ... 2018/09/11

Operation Type

☒ After Work 1 h

☐ Early Work 1 h

☐ Holiday Work 12:29 ... 12:29

☐ Stop 00:00 ... 23:59

☐ Out of assignment 2018/09/11 00:00 ... 2018/09/11 23:59

Registered List

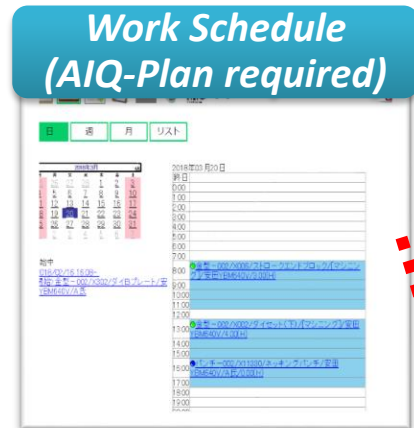
No	Equipment Name	Equipment Group	Employee No.	Name	Operation Pattern	Start Date	End Date	Type	Hours
2			1004	ST-04	08-17	2018/08/03		After Work	1.00
2			10051	ST-051	08-17	2018/08/03		After Work	1.00
2			10052	ST-052	20-05	2018/08/03		After Work	1.00
2			1006	ST-06	08-17	2018/08/03		After Work	1.00
3	MC01AF	MCAF		24		2018/08/03		After Work	1.00
3	MC01BE	MCBE		24		2018/08/03		After Work	1.00
3	MC02	MC		24		2018/08/03		After Work	1.00
3	MC02BE	MCBE		24		2018/08/03		After Work	1.00



AIQ V11

4. Web Terminal

Result Input by Web Browser (Internet Explorer, Chrome, Firefox, etc.)



AIQ
Activity Industrial Quality

Number of remaining login: 3

Group Name

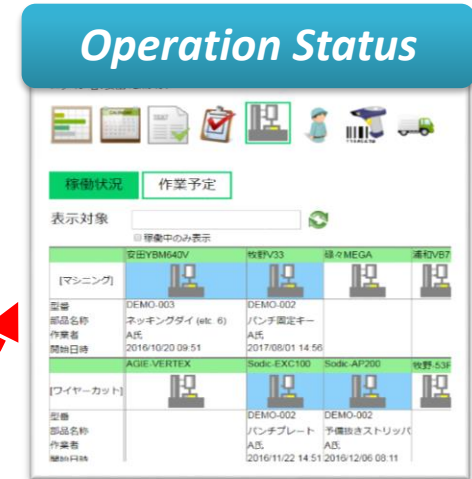
Equipment Name

Password

Login Login Information



PC



Process Table

Part Name Part No.	Scheduled Process	Process1	Process2	Process3
CAVITY P001	Scheduled Process Result Equipment Man-hour(Result Manhour) Result End Date	[CNC-LATHE]	[INSPECTION]	POLISHING-1
CORE BASE P002	Scheduled Process Result Equipment Man-hour(Result Manhour) Result End Date	[INSPECTION]	POLISHING-2	+
GATE PAD P003	Scheduled Process Result Equipment Man-hour(Result Manhour) Result End Date	CNC-HASS1 12:00H(227H) 2018/11/15	POLISHING-3	CNC-MAKING1
GATE (INSERT) P004	Scheduled Process Result Equipment Man-hour(Result Manhour) Result End Date	[CNC-LATHE]	+	
POPPET P005	Scheduled Process Result Equipment Man-hour(Result Manhour) Result End Date	CNC-HASS1	+	

Result Registration

Order Code

Part No.

Process Name

Plan Date

Equipment Name

Operator

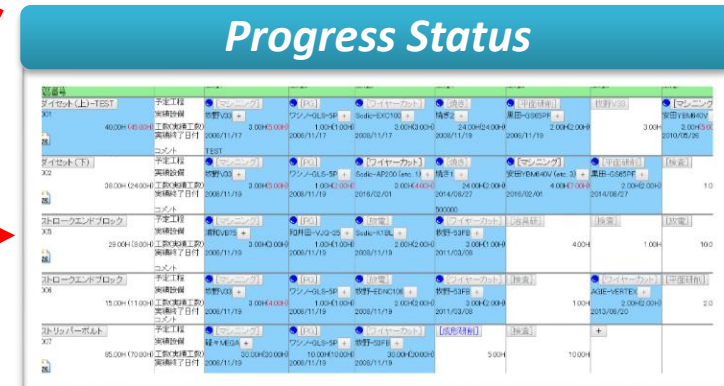
Machining Time

Operating Section

Next process

Comments on the result

Start Completed Cancel



AIQ V11

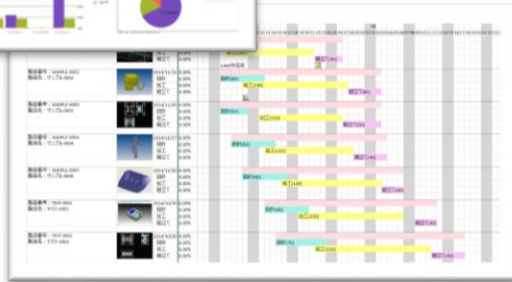
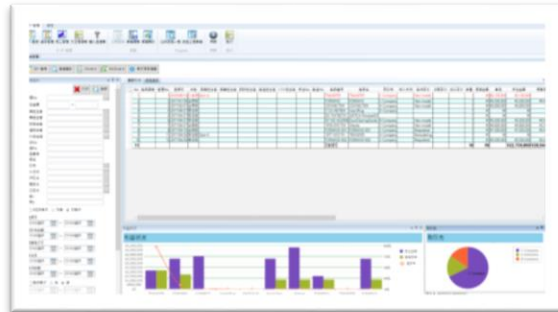
Option / Customization

◆ Customization

Data I/O with core system



AIQ Database
(SQL server)



◆ Customization

Sheet Output in original format

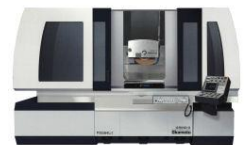
◆ Customization

Auto Result Collection by DNC



◆ Option

Auto Result Collection by CSV import
(from M/C controller or Monitoring system)



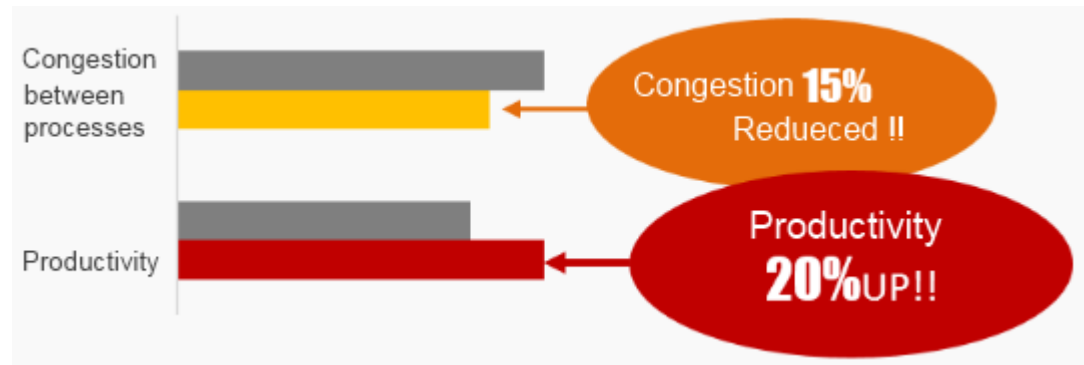
◆ Standard

Result Registration by Web Terminal

Productivity increased by 20% by visualization of production site

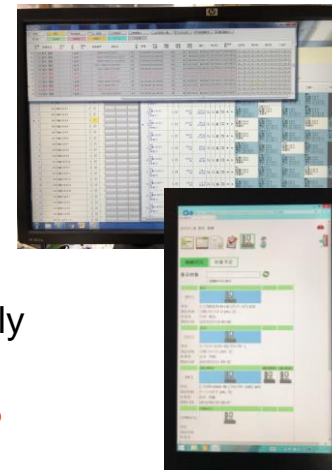


TAKAKI Kanagata (Mold Mfg.)
www.takaki-kanagata.jp



“Visualization” allows each person in charge to work with efficiency consideration. Also, collective machining of multiple works can be realized to raise the machine operation rate. Meanwhile, we have **reduced retention between processes by 15%** by preparing the next work referring to the planned schedule.

In this way, changes in the consciousness and behavior of the workplace are directly linked, the mold production time has been greatly shortened, and the **productivity has improved by 20%**. Currently, **machine operation rate including Saturdays and Sundays is 85 to 90%** thanks to AIQ, allowing us to expand the business.



System Requirements

Database (24-hour use)

- Windows Server* 2016 or later version
 - * CAL (Client Access License) is required for every client PC. (Except for Essential Edition)
- Microsoft SQL Server* 2014 or later version
 - * CAL (Client Access License) is required for every client PC. (Except for Express Edition)
- CPU : Intel Xeon E5 or more
- RAM : 16GB (32GB recommended)

Main PC / Database (Non-24-hour use)

- OS : Windows 7 Professional* / 10 Pro (64bit) * Windows 7 is supported until 2019.
- CPU : Intel Core i5 / Core i7 or more
- RAM : 8GB (16GB recommended)
- Microsoft Office : Excel 2007 or later version

Sub PC

- OS : Windows 7 Professional* / 10 Pro (64bit) * Windows 7 is supported until 2019.
- RAM : 4GB or more

AIQ

www.cgsys.co.jp/en/aiq/