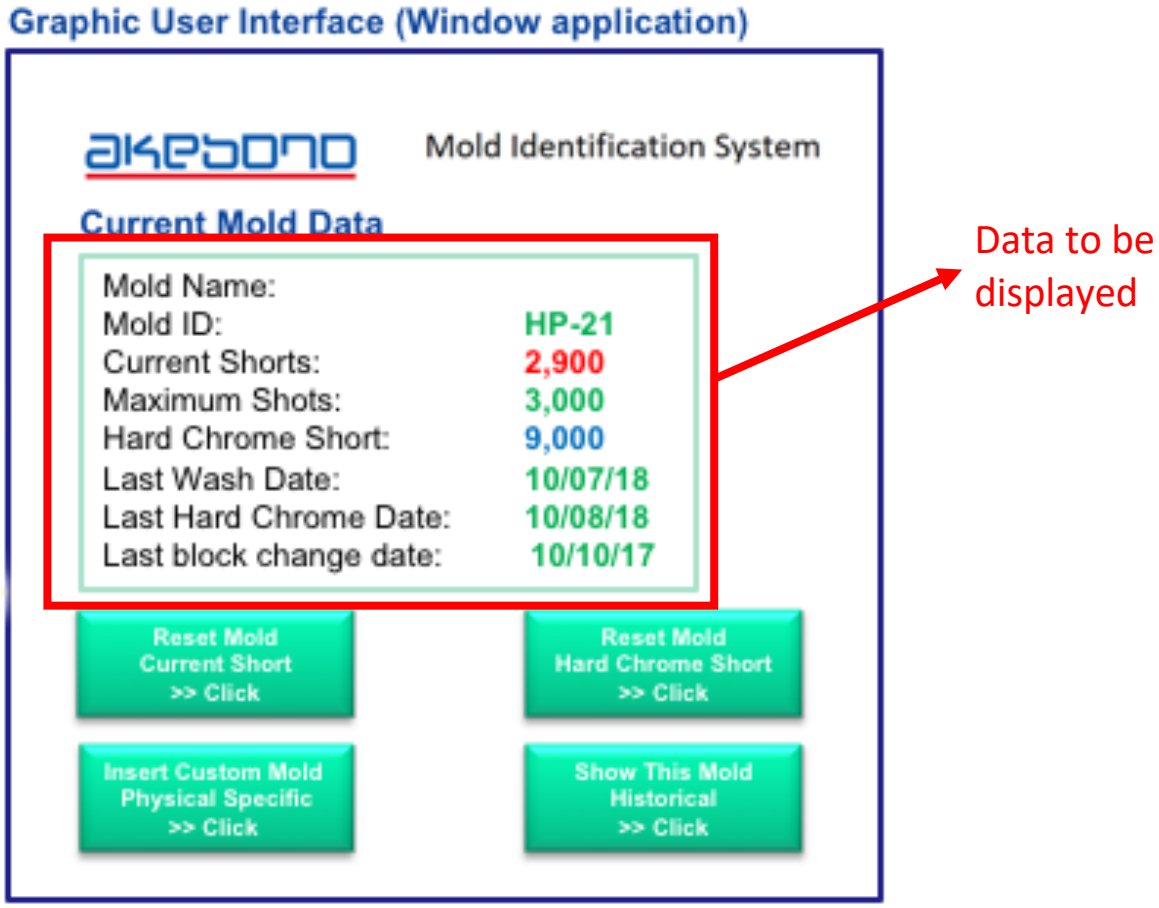
Akebono Project | Final Document

(Please follow this document)

1) Main Page | Akebono Main page



- » Admin/User input the **Mold ID** value manually.
- » Rest of the data from DB
- » Display data

2) Slide: 2 | Status Mold Display

STATUS MOLD DISPLAY

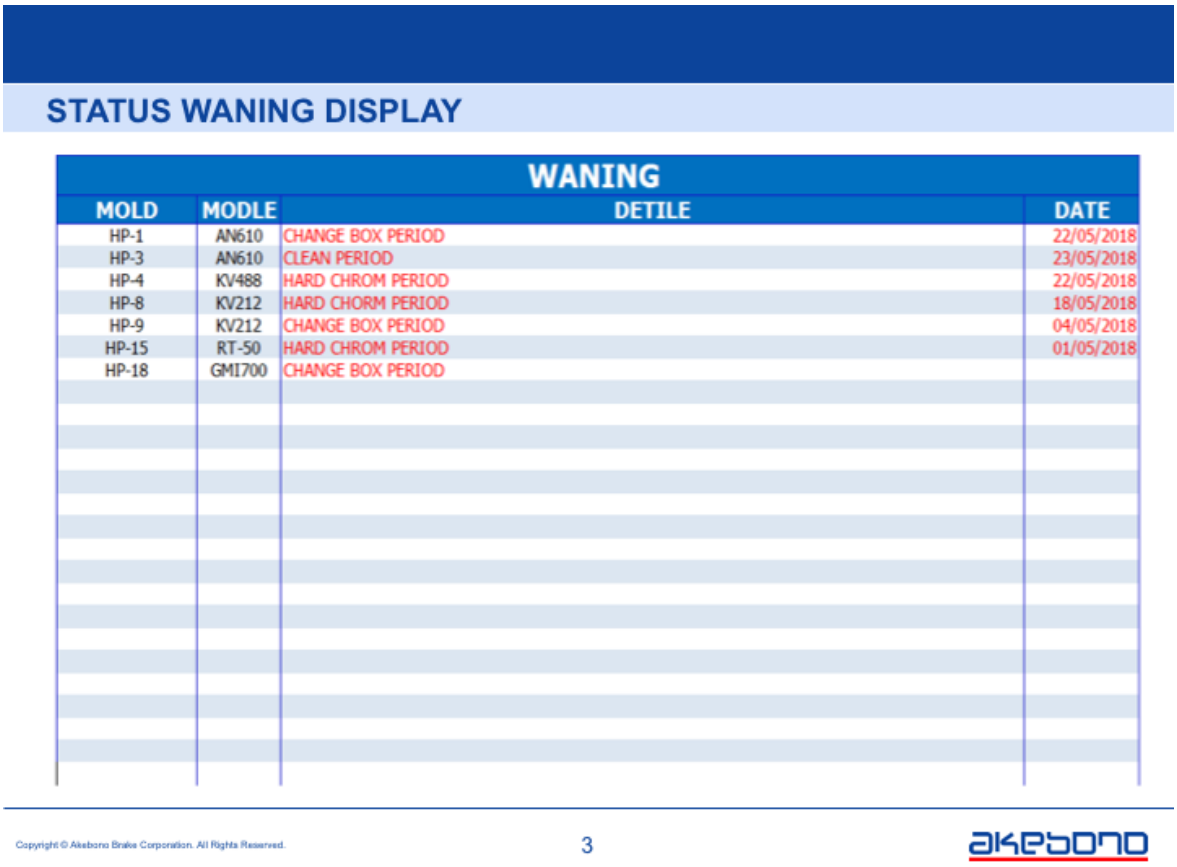
Mold ID STATUS DISPLAY								STATUS RUNNING	M/C
SETTING / MOLD	MODEL	SHOT COUNTER		HARD CHORM		CHANGE BOXES			
		CURRENT	SETTING	CURRENT	SETTING	CURRENT	SETTING		
HP-1	AN610	3333	6000	11245	30000	121113	100000	●	HOTPRESS 3
HP-2	AN610	3455	8000	23414	30000	30002	120000	●	HOTPRESS 3
HP-3	AN610	8100	8000	35245	40000	45235	140000	●	HOTPRESS 3
HP-4	KV488	2134	5000	41245	40000	13445	100000	●	
HP-5	KV488	1220	7000	35028	40000	43279	100000	●	
HP-6	KV488	3734	7000	34592	50000	46352	100000	●	
HP-7	KV212	5645	5000	44534	50000	48272	100000	●	HOTPRESS 10
HP-8	KV212	1384	6000	56254	50000	98763	100000	●	HOTPRESS 10
HP-9	KV212	1012	6000	48262	50000	142092	100000	●	HOTPRESS 10
HP-10	KV391	3432	6000	42642	50000	84750	100000	●	
HP-11	KV391	4847	6000	45895	50000	77289	100000	●	
HP-12	KV391	4563	6000	42748	50000	48473	100000	●	
HP-13	RT-50	7629	6000	23348	50000	59382	100000	●	
HP-14	RT-50	3937	6000	22348	50000	33404	100000	●	
HP-15	RT-50	5837	6000	53345	50000	98467	100000	●	
HP-16	GMI700	8276	6000	34227	50000	89372	100000	●	HOTPRESS 5
HP-17	GMI700	4726	6000	7346	50000	49374	100000	●	HOTPRESS 5
HP-18	GMI700	4726	6000	48274	50000	107364	100000	●	HOTPRESS 5
HP-19	KV127	5I92	6000	2364	50000	47264	100000	●	
HP-20	KV127	100	6000	273	50000	87294	100000	●	
HP-21	KV127	3495	6000	48274	50000	82749	100000	●	

● MOLD STANDBY
● MOLD RUNNING IN MACHINE

- » Display only
- » Data from DB

***Note: Change Box(es) has to be changed to Die Change in every page.**

3) Slide: 3 | Status Warning Display

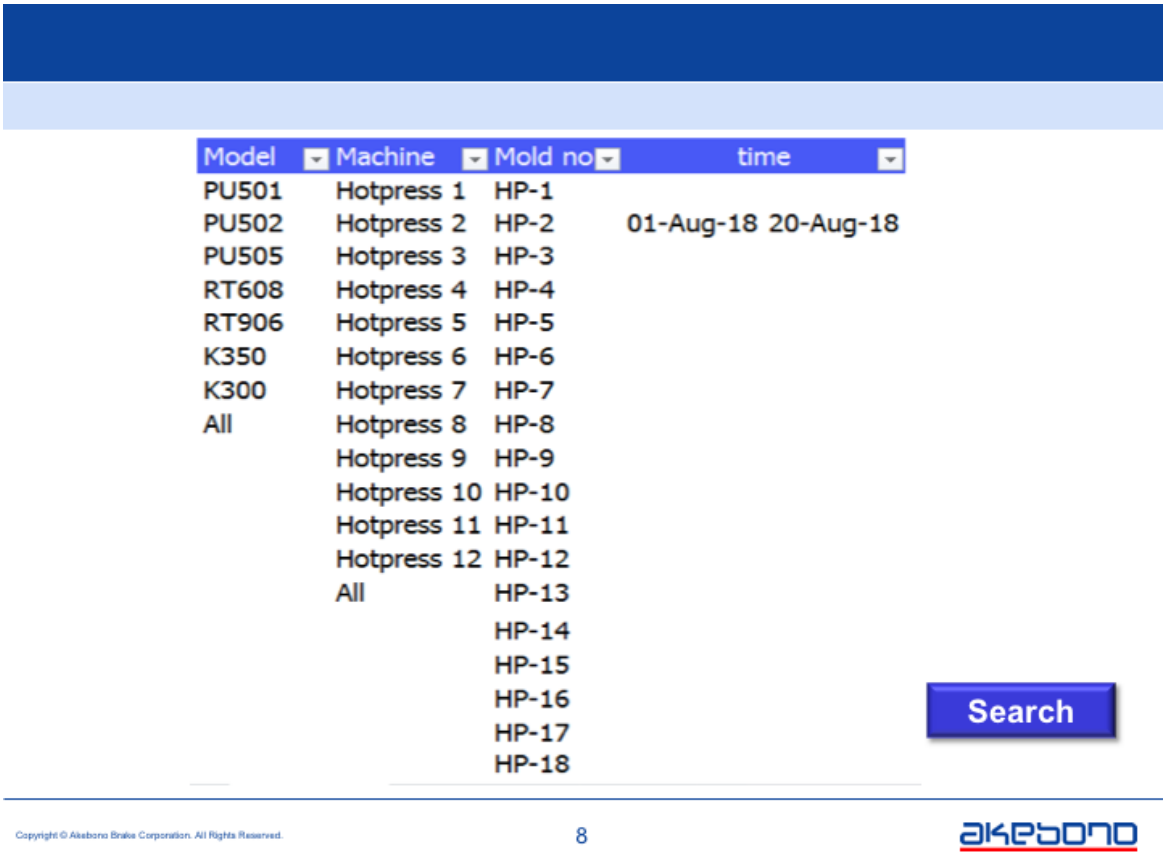


STATUS WANING DISPLAY

WANING			
MOLD	MODLE	DETILE	DATE
HP-1	AN610	CHANGE BOX PERIOD	22/05/2018
HP-3	AN610	CLEAN PERIOD	23/05/2018
HP-4	KV488	HARD CHROM PERIOD	22/05/2018
HP-8	KV212	HARD CHORM PERIOD	18/05/2018
HP-9	KV212	CHANGE BOX PERIOD	04/05/2018
HP-15	RT-50	HARD CHROM PERIOD	01/05/2018
HP-18	GMI700	CHANGE BOX PERIOD	

- Display Only
- Data from DB
- E-mails to be sent out to 10 email IDs
- Warning Display Details:
  - Change Box Period: When **Die Change Box Current** Value > **Die Change Box Setting**
  - Clean Period: When **Shot Counter Current** > **Shot Counter Setting**
  - Hard Chrom Period: When **Hard Chrom Current** > **Hard Chrom Setting**

4) Search



» Please follow the above drop-down for every **SEARCH**.

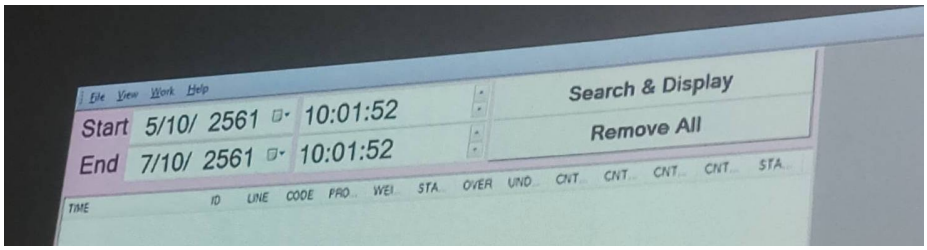
5) Slide: 4 | Status History Display

STATUS HISTORY DISPLAY EX : MODEL HP-21

MOLD HISTORY ITEM : HP-21						
DATE	SHOT COUNTER		HARD CHORM		CHANGE BOXES	
	HISTORY COUNT	STATUS	HISTORY COUNT	STATUS	HISTORY COUNT	STATUS
11-Jan-2016	3333	●	11245		3333	
22-Dec-2016	3455	●	14700		6788	
14-Apr-2017	6587	●	18155	●	13375	
3-Jan-2018	5468	●	5468		18843	
4-Jul-2018	7654	●	13122		26497	
4-Aug-2018	5000	●	18122		31497	
10-Sep-2018	4872	●	22994		36369	●
1-Nov-2018	4857	●	27851	●	4857	
4-Feb-2019	7256	●	7256		12113	
5-Mar-2019	4827	●	12083		16940	
29-May-2019	8764	●	20847		25704	
30-Jul-2019	5832	●	26679	●	31536	
21-Aug-2019	8765	●	8765		40301	●
5-Oct-2019	5826	●	14591		5826	
22-Dec-2019	5635	●	20226	●	11461	
2-Feb-2020	5687	●	5687		17148	
14-Mar-2020	7000	●	12687		24148	
3-Apr-2020	4759	●	17446		28907	
21-Jun-2020	6857	●	24303	●	35764	●
28-Aug-2020	5938	●	5938		5938	
15-Oct-2020	6984	●	12922		12922	

● WORK STATUS ON TIME

- » Display only
- » Search tab
  - Start Date & End date.



(Please follow the above image for start date and end date. Please add Search & Display + Remove all)

  - Data from DB
  - Search by **Model.**
- » Report

6) Slide: 5 | Forecast Setting

Forecast setting will have the following fields.

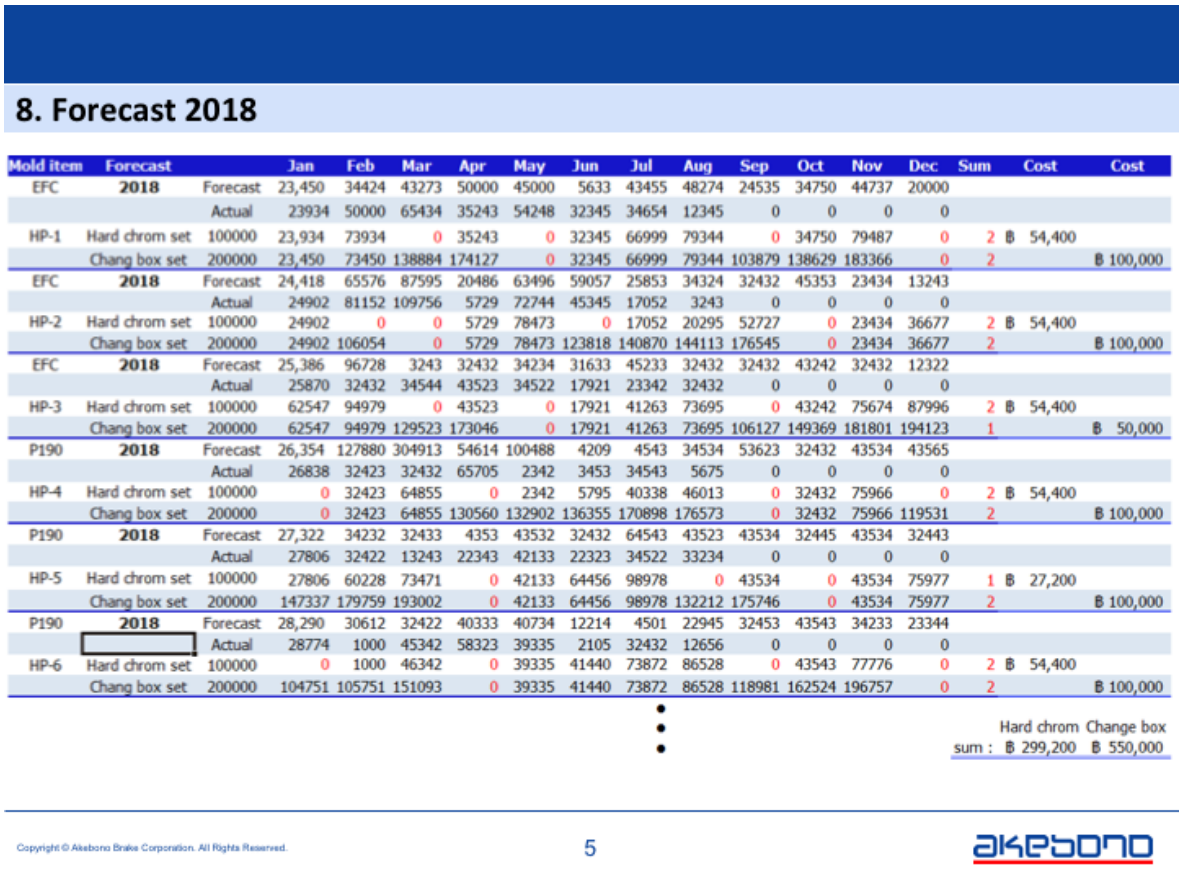
Model	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Yaris	60,000	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx	xx,xxx

» Admin/User input the values manually.
» Admin/user adds the model and subsequent values for each month.
  - In this example, admin adds **Yaris** for **Model** and **60,000** for the month of January
  - Yaris has 3 molds. Different models have different number of mold. [Mold details can be fetched from **Mold Settings]** (slide 13)
  - Formula for getting Forecast (for Forecast page) is:

    Value for Month/Mold Number

    So, for January;
    60,000/3 = 20,000
    This value is added in the Forecast page for same month.
» More models can be added but not mode than 1,000 models.
» 3 years planning.

7) Slide: 5 | Forecast Setting



8. Forecast 2018

Mold item	Forecast		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sum	Cost	Cost
EFC	2018	Forecast	23,450	34424	43273	50000	45000	5633	43455	48274	24535	34750	44737	20000			
		Actual	23934	50000	65434	35243	54248	32345	34654	12345	0	0	0	0			
HP-1	Hard chrom set	100000	23,934	73934	0	35243	0	32345	66999	79344	0	34750	79487	0	2	฿ 54,400	
	Chang box set	200000	23,450	73450	138884	174127	0	32345	66999	79344	103879	138629	183366	0	2		฿ 100,000
EFC	2018	Forecast	24,418	65576	87595	20486	63496	59057	25853	34324	32432	45353	23434	13243			
		Actual	24902	81152	109756	5729	72744	45345	17052	3243	0	0	0	0			
HP-2	Hard chrom set	100000	24902	0	0	5729	78473	0	17052	20295	52727	0	23434	36677	2	฿ 54,400	
	Chang box set	200000	24902	106054	0	5729	78473	123818	140870	144113	176545	0	23434	36677	2		฿ 100,000
EFC	2018	Forecast	25,386	96728	3243	32432	34234	31633	45233	32432	32432	43242	32432	12322			
		Actual	25870	32432	34544	43523	34522	17921	23342	32432	0	0	0	0			
HP-3	Hard chrom set	100000	62547	94979	0	43523	0	17921	41263	73695	0	43242	75674	87996	2	฿ 54,400	
	Chang box set	200000	62547	94979	129523	173046	0	17921	41263	73695	106127	149369	181801	194123	1		฿ 50,000
P190	2018	Forecast	26,354	127880	304913	54614	100488	4209	4543	34534	53623	32432	43534	43565			
		Actual	26838	32423	32432	65705	2342	3453	34543	5675	0	0	0	0			
HP-4	Hard chrom set	100000	0	32423	64855	0	2342	5795	40338	46013	0	32432	75966	0	2	฿ 54,400	
	Chang box set	200000	0	32423	64855	130560	132902	136355	170898	176573	0	32432	75966	119531	2		฿ 100,000
P190	2018	Forecast	27,322	34232	32433	4353	43532	32432	64543	43523	43534	32445	43534	32443			
		Actual	27806	32422	13243	22343	42133	22323	34522	33234	0	0	0	0			
HP-5	Hard chrom set	100000	27806	60228	73471	0	42133	64456	98978	0	43534	0	43534	75977	1	฿ 27,200	
	Chang box set	200000	147337	179759	193002	0	42133	64456	98978	132212	175746	0	43534	75977	2		฿ 100,000
P190	2018	Forecast	28,290	30612	32422	40333	40734	12214	4501	22945	32453	43543	34233	23344			
		Actual	28774	1000	45342	58323	39335	2105	32432	12656	0	0	0	0			
HP-6	Hard chrom set	100000	0	1000	46342	0	39335	41440	73872	86528	0	43543	77776	0	2	฿ 54,400	
	Chang box set	200000	104751	105751	151093	0	39335	41440	73872	86528	118981	162524	196757	0	2		฿ 100,000

Hard chrom Change box
sum : ฿ 299,200 ฿ 550,000

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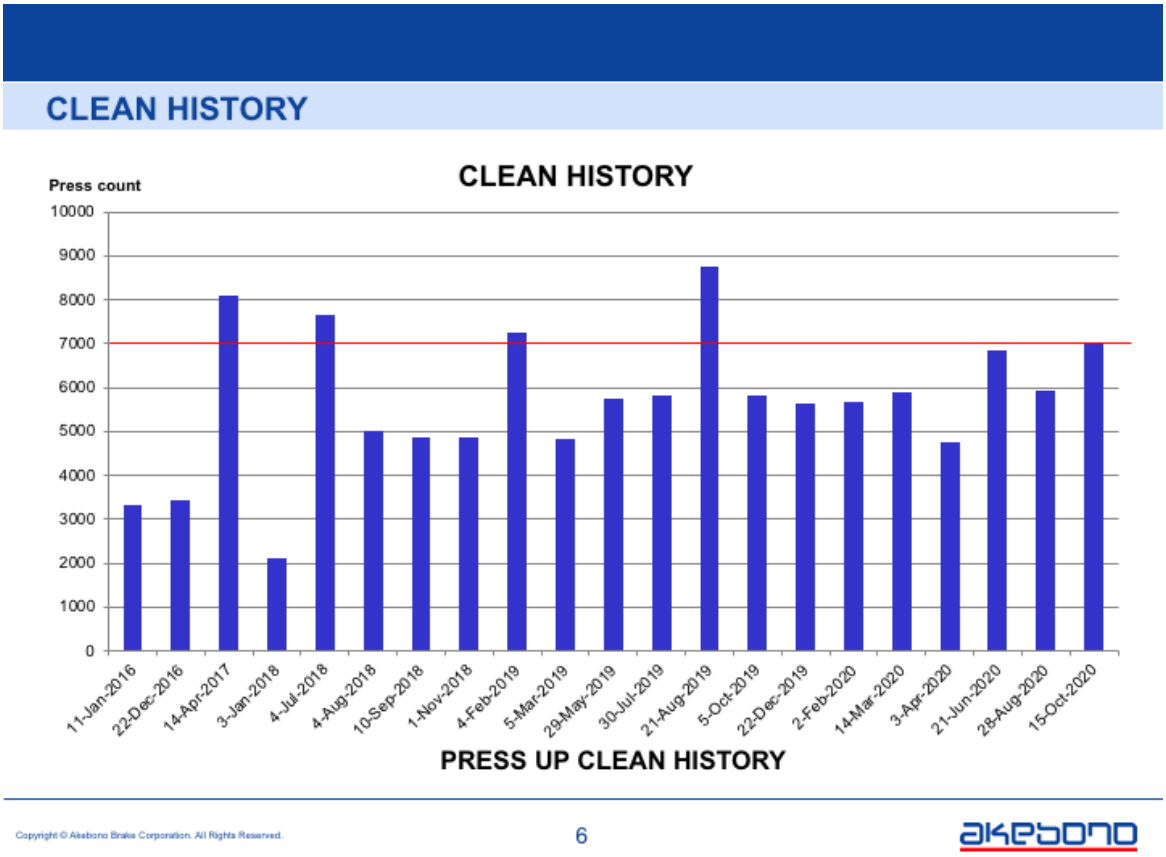
Mold Item	Forecast		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Sum	Cost	Cost
EFC	2018	Forecast	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12			
		Actual	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12			
HP-1	Hard Chrom	100,000 (X)	C1	C2	C3 (0)	C4	C5 (0)	C6	C7	C8	C9 (0)	C10	C11	C12 (0)	2	฿54,400	
	Die Change	200,000 (Y)	D1	D2	D3	D4	D5 (0)	D6	D7	D8	D9	D10	D11	D12 (0)	2		฿100,000

- » Forecast data are from Forecast Setting
- » Actual data are collected from DB
- » The X and Y values are set by admin/user. These are the targets.
- » Calculations: *(Please refer to the above example)*
  - If the Hard Chrom is “0”, then “0” + Actual.
    C1 = 0+B1
  - If the Die Change is “0”, then “0” + Actual.
    D1 = 0 + B1
  - If the actual is “0”, then
    Hard Chrom + Forecast; C2 = C1 + A2
    Die Change + Forecast; D2 = D1 + A2

  - C1 = Hard Chrome value + B1
  - D1 = Die Change + B1
  - C2 = C1 + B2
  - D2 = D1 + B2
  - C3 = C2 + B3
  - D3 = D2 + B3

- When Hard Chrom (C) value reaches the target "X" value, it resets the Hard Chrom value to "0".
- When Die Change (D) value reaches the target "Y" value, it resets both Hard Chrom & Die Change values to "0".
- When both Hard Chrom & Die Change values reset to "0", the sum value counts 1. Sum value is the number of times the Hard Chrome and Die Change values reset together.
- Pricing:
    - We get the pricing from Mold Settings
    - Hard Chrom Price X Sum = Cost (Hard Chrom)
    - Die Change Price X Sum = Cost (Die Change)

8) Slide: 6 | Clean History



» Data from DB
» Search/Select by Date Range.
» Trends to be shown and not bar graph

» Requires 3 graphs.
  - Clean → Data can be fetched from **Shot Counter Current** in **Status Mold Display**
  - Hard Chrom → Data can be fetched from **Hard Chrom Current** in **Status Mold Display**
  - Die Change → Data can be fetched from **Die Change Current** in **Status Mold Display**

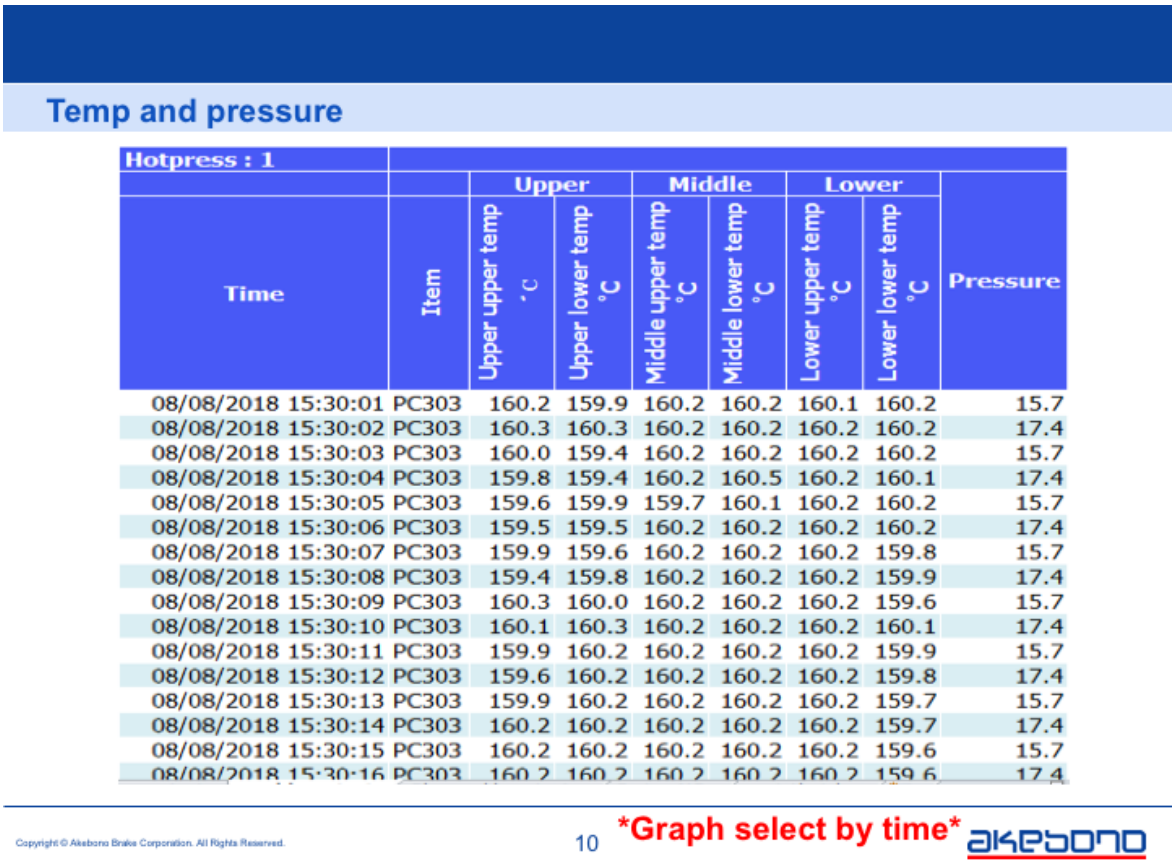
9) Slide: 7 | Production Data Logger

Production data logger

Date	Time	Item	Hot press M/C	Mold No.	Up/Down/Lower	Pcs.	Upper temp ℃	Lower temp ℃
18Aug18	15:50	PU305	5	HP-1	Up die	6	161.5	160.0
18Aug18	15:50	PU305	5	HP-2	Middle die	6	160.3	160.3
18Aug18	15:50	PU305	5	HP-3	Lower die	6	160.4	160.3
18Aug18	15:5	FU305	12	HP-55	Up die	4	160.2	159.4
18Aug18	15:52	FU305	12	HP-56	Middle die	4	160.1	160.0
18Aug18	16:10	KP135	9	HP-44	Up die	6	158.7	158.9
18Aug18	16:10	KP135	9	HP-45	Middle die	6	160.2	160.4
18Aug18	16:10	KP135	9	HP-47	Lower die	6	160.3	159.3

» Data from DB
» Follow the format

10) Slide: 10 | Temperature & Pressure



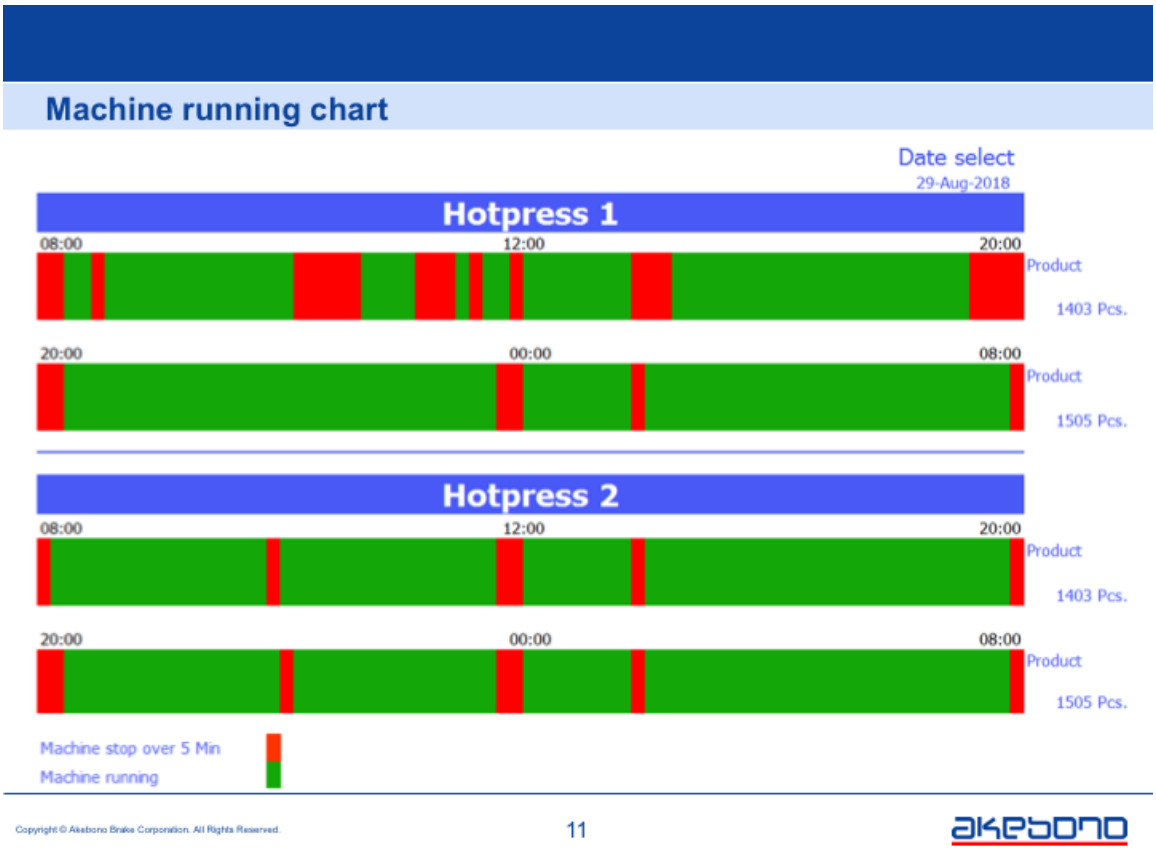
Temp and pressure

Hotpress : 1								
		Upper		Middle		Lower		
Time	Item	Upper upper temp °C	Upper lower temp °C	Middle upper temp °C	Middle lower temp °C	Lower upper temp °C	Lower lower temp °C	Pressure
08/08/2018 15:30:01	PC303	160.2	159.9	160.2	160.2	160.1	160.2	15.7
08/08/2018 15:30:02	PC303	160.3	160.3	160.2	160.2	160.2	160.2	17.4
08/08/2018 15:30:03	PC303	160.0	159.4	160.2	160.2	160.2	160.2	15.7
08/08/2018 15:30:04	PC303	159.8	159.4	160.2	160.5	160.2	160.1	17.4
08/08/2018 15:30:05	PC303	159.6	159.9	159.7	160.1	160.2	160.2	15.7
08/08/2018 15:30:06	PC303	159.5	159.5	160.2	160.2	160.2	160.2	17.4
08/08/2018 15:30:07	PC303	159.9	159.6	160.2	160.2	160.2	159.8	15.7
08/08/2018 15:30:08	PC303	159.4	159.8	160.2	160.2	160.2	159.9	17.4
08/08/2018 15:30:09	PC303	160.3	160.0	160.2	160.2	160.2	159.6	15.7
08/08/2018 15:30:10	PC303	160.1	160.3	160.2	160.2	160.2	160.1	17.4
08/08/2018 15:30:11	PC303	159.9	160.2	160.2	160.2	160.2	159.9	15.7
08/08/2018 15:30:12	PC303	159.6	160.2	160.2	160.2	160.2	159.8	17.4
08/08/2018 15:30:13	PC303	159.9	160.2	160.2	160.2	160.2	159.7	15.7
08/08/2018 15:30:14	PC303	160.2	160.2	160.2	160.2	160.2	159.7	17.4
08/08/2018 15:30:15	PC303	160.2	160.2	160.2	160.2	160.2	159.6	15.7
08/08/2018 15:30:16	PC303	160.2	160.2	160.2	160.2	160.2	159.6	17.4

Graph select by time

- Data from DB
- Follow the format
- Add search bar
  - Search by Machine

11) Slide: 11 | Machine Running Chart

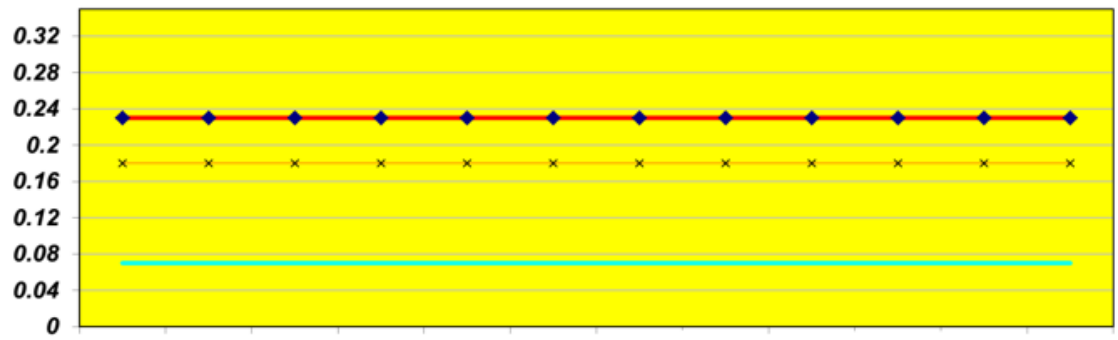


- » Red Color → Machine Stop
- » Green Color → Machine Running
- » Data from DB
  - There are two shifts:
    8:00 AM to 8:00 PM
    8:00 PM to 8:00 AM → 2 Shifts
- » Follow the format
- » Add search bar
  - Search by Date Range
  - Search by Machine

12) Slide: -- | Machine Control Mold

Maintenance Control Mold

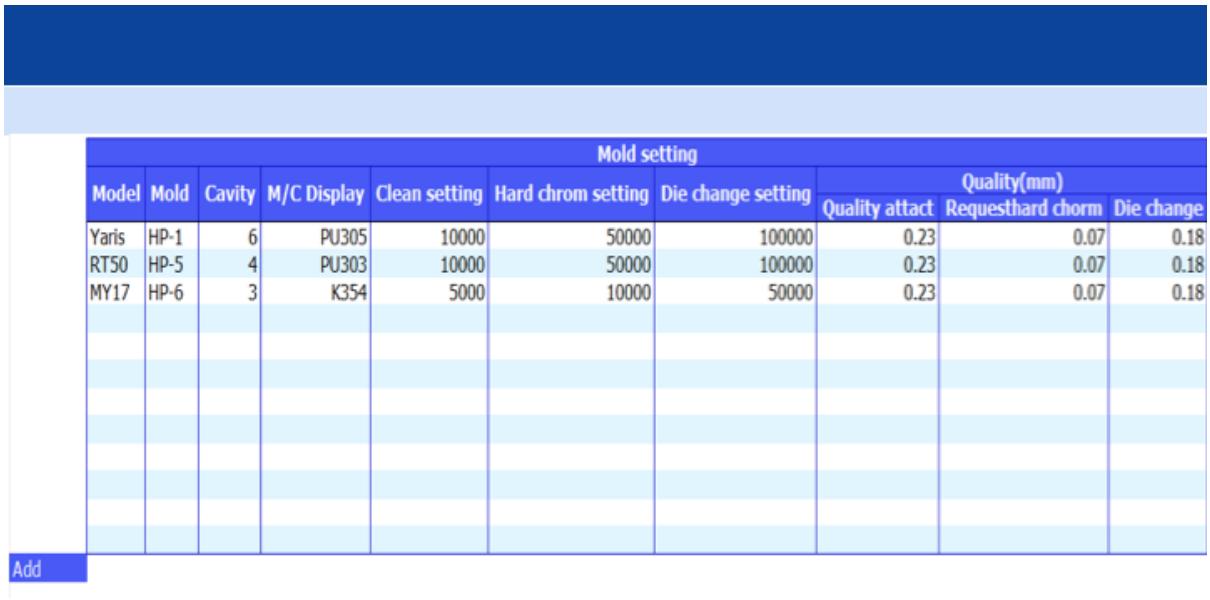
Mold Name : Hot Press	Mold No. :	Model :	Characteristic : ตรวจวัดค่าความลึก(mm.)



ยอดผลิต												
มีผลกระทบต่อคุณภาพ	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
เปลี่ยนแม่พิมพ์ใหม่	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
ส่ง Hard Chrome	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Block A												
Block B												
Block C												
Block D												
Block E												
Block F												
Inspector By												
Checked By												

- » Data from DB
- » Monitor only
- » Follow the format

13) Slide: 13 | Mold Setting



Mold setting									
Model	Mold	Cavity	M/C Display	Clean setting	Hard chrom setting	Die change setting	Quality(mm)		
							Quality attact	Requesthard chorm	Die change
Yaris	HP-1	6	PU305	10000	50000	100000	0.23	0.07	0.18
RT50	HP-5	4	PU303	10000	50000	100000	0.23	0.07	0.18
MY17	HP-6	3	K354	5000	10000	50000	0.23	0.07	0.18

Add

- » Data from DB
- » Monitor only
- » Follow the format
- » Two more columns to be added after Die Change:

Price	
Hard Chrom	Die Change
30,000	10,000
20,000	5,000

  - These details are to be filled manually

14)Mold (Excel File)

(Refer to the attached Excel File.)

- » Every field has to be field manually.
- » Column B: Quotation Number
  - Click to open a folder/file path. Import the file and save the file to the server.
- » Column Q: Number PO
  - Click to open a folder/file path. Import the file and save the file to the server.
- » Column V: Data Inspection (Scan)