

Measuring System



Use

It is necessary to control various casting factors to produce high quality die casting product in large quantities.

We are ready to design and produce measuring • recording systems for various purpose meeting customer's requirement. In addition, System in combination with Injection Monitoring System (IM-12V) can be used as a supporting device for DC machine (for output Abnormal judgment signal/Contact signal).

Characteristics

It is possible to judge the result in combination with various measuring data by setting value(upper/lower limit) in each measuring item

In addition, the data can be used as multivariate analysis to study gating system.

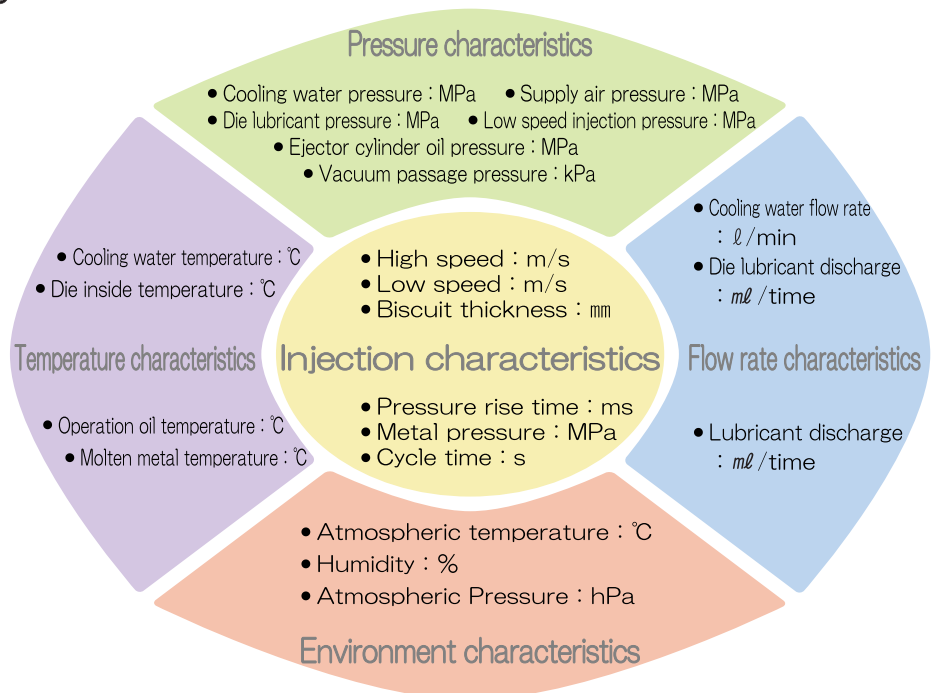
項目	設定値	単位	項目	設定値	単位
高速速度	2.000	m/s	低速時圧力	20.0	MPa
低速速度	1.000	m/s	油温温度	80.0	°C
ピストン厚	25.0	mm	型1温度	120.0	°C
滞在時間	55	ms	型2温度	200.0	°C
押圧	50.0	MPa	型3温度	80.0	°C
サドル圧	45.0	MPa	真空圧	-0.0	MPa
高速ロード	100.0	MPa	公差設定		
	100.0	MPa	確定		

Example of management value setting (Touch panel)

Example of measuring item

In combination with various sensors, characteristics value can be measured as shown in the chart.

We are ready to propose our customers most suitable systems which can measure pressure, temperature characteristics, gas volume involved, etc. as well as injection characteristics on customer's requirement.

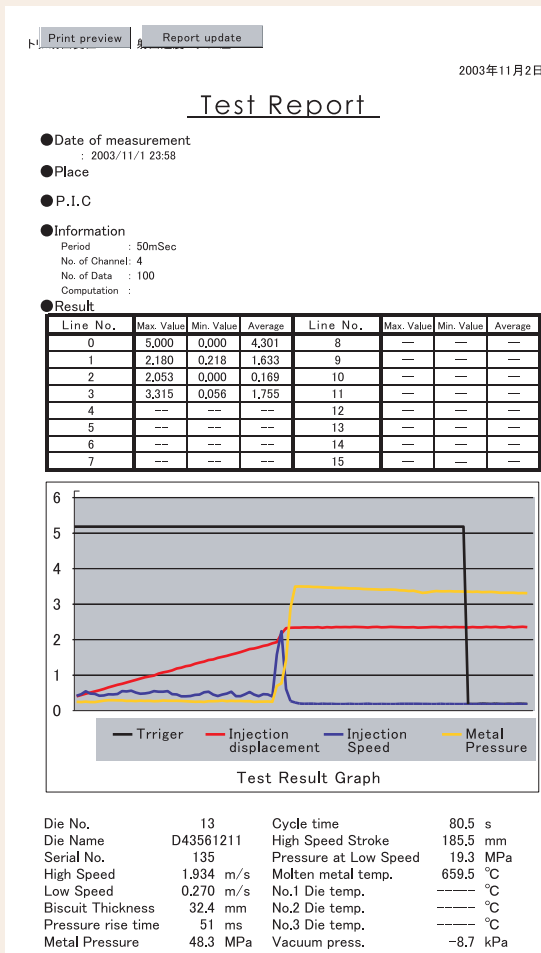


Effect

- Storing the measuring data is possible, which can be used as a proof for traceability of product.
- When disorder was found after finishing process such as heat-treatment, it can be used to analyze which property value there was malfunction in.
- Test report for the casting condition of every shot is available. So, it is easy to compare and examine data.
- Recording wave from data (analog) is possible. It can be used to analyze trend in all the manufacturing processes.

Time	Die No.	Die Name	Serial No.	High Speed m/s	Low Speed m/s	Biscuit Thick mm	Pressure rise time	Value										
								metal pressure Mpa	Cycle time s	High speed stroke mm	Pressure at Low speed Mpa	molten metal temp. °C	No.1 Die temp. °C	No.2 Die temp. °C	No.3 Die temp. °C	Vacuum press. Kpa		
2003/11/1 23:59	13	MCO 2WD150	6473	1.934	0.270	---	---	81	65.8	80.5	185.5	28.0	659.5	---	---	---	---	-8.1
2003/11/1 23:57	13	MCO 2WD150	6472	1.925	0.272	---	---	83	65.0	80.6	184.5	28.1	658.6	---	---	---	---	-8.2
2003/11/1 23:56	13	MCO 2WD150	6471	1.925	0.272	---	---	63	65.0	80.5	184.5	27.7	658.2	---	---	---	---	-8.0
2003/11/1 23:55	13	MCO 2WD150	6470	1.921	0.270	---	---	63	65.1	80.7	186.0	27.7	657.8	---	---	---	---	-8.0
2003/11/1 23:53	13	MCO 2WD150	6469	1.925	0.270	---	---	63	65.1	80.8	193.0	27.8	657.4	---	---	---	---	-8.1
2003/11/1 23:52	13	MCO 2WD150	6468	1.908	0.272	---	---	60	65.2	81.0	185.0	27.6	657.2	---	---	---	---	-8.0
2003/11/1 23:51	13	MCO 2WD150	6467	1.882	0.270	---	---	87	64.9	80.6	186.0	27.8	657.2	---	---	---	---	-9.1
2003/11/1 23:49	13	MCO 2WD150	6466	1.913	0.270	---	---	62	65.0	80.6	186.0	27.7	657.2	---	---	---	---	-9.0
2003/11/1 23:48	13	MCO 2WD150	6465	1.908	0.272	---	---	62	65.0	80.7	189.0	27.8	657.2	---	---	---	---	-9.1
2003/11/1 23:47	13	MCO 2WD150	6464	1.885	0.272	---	---	62	65.2	80.6	183.0	27.8	657.1	---	---	---	---	-9.1
2003/11/1 23:45	13	MCO 2WD150	6463	1.900	0.272	---	---	65	65.3	80.8	188.5	27.3	657.1	---	---	---	---	-8.0
2003/11/1 23:44	13	MCO 2WD150	6462	1.900	0.272	---	---	65	65.0	80.7	187.0	27.8	657.4	---	---	---	---	-9.1
2003/11/1 23:43	13	MCO 2WD150	6461	1.900	0.272	---	---	65	65.0	80.8	189.0	27.6	658.2	---	---	---	---	-9.1
2003/11/1 23:41	13	MCO 2WD150	6460	1.846	0.272	---	---	65	64.0	80.7	186.0	27.2	658.6	---	---	---	---	-9.0
2003/11/1 23:40	13	MCO 2WD150	6459	1.855	0.268	---	---	65	63.8	81.3	186.5	27.1	659.0	---	---	---	---	-8.9
2003/11/1 23:39	13	MCO 2WD150	6458	1.882	0.268	---	---	65	63.8	83.6	187.0	27.0	657.8	---	---	---	---	-8.9
2003/11/1 23:37	13	MCO 2WD150	6457	1.850	0.272	---	---	69	63.6	80.7	186.5	27.2	652.0	---	---	---	---	-8.9
2003/11/1 23:36	13	MCO 2WD150	6456	1.878	0.270	---	---	70	63.6	80.9	185.0	26.8	651.3	---	---	---	---	-8.9
2003/11/1 23:35	13	MCO 2WD150	6455	1.893	0.270	---	---	72	63.4	80.9	190.0	27.1	651.0	---	---	---	---	-8.9
2003/11/1 23:33	13	MCO 2WD150	6454	1.900	0.270	---	---	70	63.4	80.5	187.0	27.1	650.9	---	---	---	---	-8.9
2003/11/1 23:32	13	MCO 2WD150	6453	1.913	0.270	---	---	89	63.5	81.5	189.0	27.1	650.9	---	---	---	---	-8.9
2003/11/1 23:30	13	MCO 2WD150	6452	1.898	0.268	---	---	95	63.2	80.6	187.5	27.0	650.9	---	---	---	---	-8.8
2003/11/1 23:29	13	MCO 2WD150	6451	1.846	0.270	---	---	95	63.2	80.5	183.0	26.9	651.0	---	---	---	---	-8.8
2003/11/1 23:28	13	MCO 2WD150	6450	0.262	0.270	---	---	0	27.1	2058.0	223.0	26.7	651.3	---	---	---	---	-8.7
2003/11/1 13:47	13	MCO 2WD150	6449	1.756	0.270	---	---	81	63.3	-2184.7	223.0	27.0	655.9	---	---	---	---	-8.8
2003/11/1 7:07	13	MCO 2WD150	6448	1.767	0.270	---	---	65	63.7	171.4	187.5	26.9	656.6	---	---	---	---	-8.8

Example:Data record (recorded in Excel)



Example:Test result (made by Excel)

to Excel scope Waveform data

Trigger	Injection displacement	Injection speed	Metal pressure
5	0.217669949	0.23445487	0.063248649
5	0.253604949	0.277866781	0.058213167
5	0.292896926	0.362478077	0.069962613
5	0.323949039	0.297169447	0.05645838
5	0.358968496	0.288014024	0.058594644
5	0.387960643	0.233691916	0.077439539
5	0.424658567	0.243762881	0.096360721
5	0.47142747	0.277103841	0.109788664
5	0.505836546	0.272755027	0.108720534
5	0.541847885	0.282673389	0.105210952
5	0.570305943	0.364003956	0.104676887
5	0.609445333	0.357595176	0.088197149
5	0.645685494	0.375524521	0.092164494
5	0.682459772	0.32494086	0.084992751
5	0.718623638	0.292515457	0.097352557
5	0.752803862	0.300831616	0.088197149
5	0.778286397	0.319600224	0.093003735
5	0.804837108	0.365224689	0.082169831
5	0.860837698	0.350194544	0.086137176
5	0.892957985	0.34721905	0.10002289
5	0.916227996	0.363851368	0.093842983
5	0.947356403	0.279163808	0.093537807
5	1.001983643	0.270084679	0.093614101
5	1.026169181	0.218280315	0.087663084
5	1.065384865	0.219043255	0.080109864
5	1.088807464	0.228122383	0.071030743
5	1.137178659	0.259555966	0.063248649
5	1.169222593	0.26642251	0.067978941
5	1.195468068	0.333485931	0.060959794
5	1.242160678	0.347753108	0.082703896
5	1.257190824	0.268024713	0.052246125
5	1.300602674	0.227740899	0.08690013
5	1.33249414	0.268329889	0.10002289
5	1.357824087	0.297703505	0.081635766
5	1.396887183	0.347981989	0.094453342

Example: Value data of waveform (recorded in Excel)

Please ask us about property value item, record form, price, delivery date etc.