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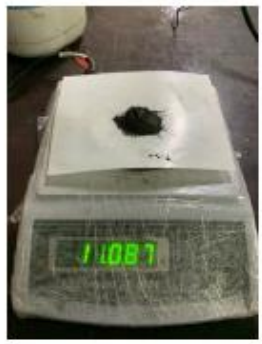
LAMPIRAN

Lampiran 1. Dokumentasi pengecoran

Prosedur Pengecoran	
	Penimbangan Aluminium 2024 untuk pengecoran Spesimen VI (Produk Cor Silinder).
	Penimbangan Silikon Karbida untuk pengecoran Spesimen VI (Produk Cor Silinder).
	Penimbangan Nikel untuk pengecoran Spesimen VI (Produk Cor Silinder).

Prosedur Pengecoran	
	Dimasukkannya Aluminium 2024 yang telah ditimbang ke dalam *furnace* (tungku).
	Suhu yang digunakan untuk meleburkan Aluminium 2024.

Prosedur Pengecoran	
	Dimasukkannya cetakan ke dalam *furnace*.
	Dilakukannya *stirring* pada Alumnium cair yang telah dileburkan.

Prosedur Pengecoran	
	Kecepatan pengadukan pada alat *stir*.
	Dikeluarkannya cetakan dari dalam *furnace*.
	Proses pencampuran material serbuk pada *stir casting*.

Prosedur Pengecoran	
	*Crucible* diputar pada saat *stir casting* agar serbuk yang telah ditabur menyebar secara merata
	Suhu cetakan yang digunakan sebelum penuangan.

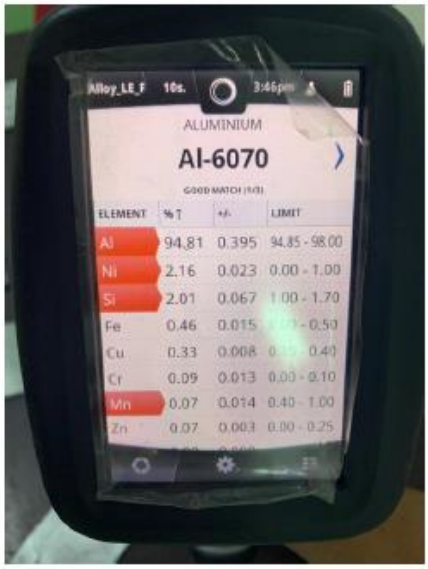
Prosedur Pengecoran	
	Proses penuangan ke dalam cetakan.
	Cetakan silinder yang telah dituangkan AMC (80% Al 2024 + 15% SiC + 5% Ni).

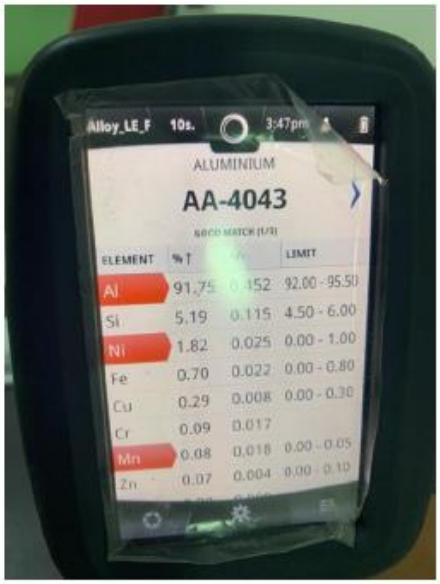
Lampiran 2. Dokumentasi produk cor

Produk Cor Plat			
Spesimen I (84% Al 6061 + 15% SiC + 1% Ni)	Spesimen II (82% Al 6061 + 15% SiC + 3% Ni)	Spesimen III (80% Al 6061 + 15% SiC + 5% Ni)	Spesimen IV (84% Al 2024 + 15% SiC + 1% Ni)
			
Spesimen V (82% Al 2024 + 15% SiC + 3% Ni)	Spesimen VI (80% Al 2024 + 15% SiC + 5% Ni)	Spesimen VII (82% Al 6061 + 15% SiC + 3% Mg)	Spesimen VIII (82% Al 2024 + 15% SiC + 3% Mg)
			

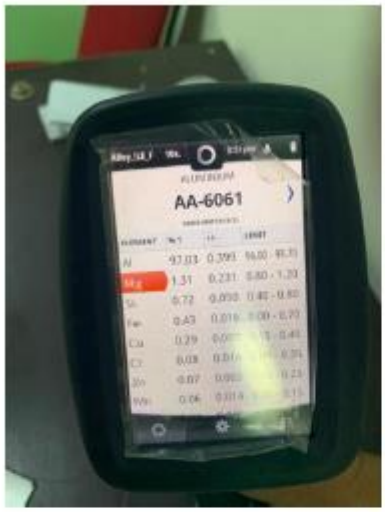
Produk Cor Silinder			
Spesimen I (84% Al 6061 + 15% SiC + 1% Ni)	Spesimen II (82% Al 6061 + 15% SiC + 3% Ni)	Spesimen III (80% Al 6061 + 15% SiC + 5% Ni)	Spesimen IV (84% Al 2024 + 15% SiC + 1% Ni)
			
Spesimen V (82% Al 2024 + 15% SiC + 3% Ni)	Spesimen VI (80% Al 2024 + 15% SiC + 5% Ni)	Spesimen VII (82% Al 6061 + 15% SiC + 3% Mg)	Spesimen VIII (82% Al 2024 + 15% SiC + 3% Mg)
			

Lampiran 3. Dokumentasi pengujian XRF

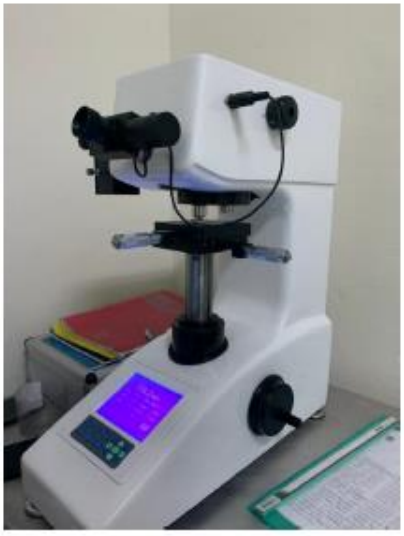
<table>
<tr><th colspan="2">Pengujian XRF</th></tr>
<tr><td> 
</td><td>Spesimen I
(84% Al 6061 + 15% SiC + 1% Ni)</td></tr>
<tr><td> 
</td><td>Spesimen II
(82% Al 6061 + 15% SiC + 3% Ni)</td></tr>
</table>

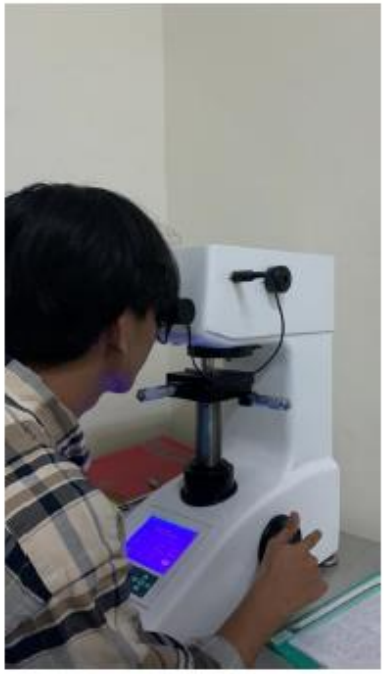
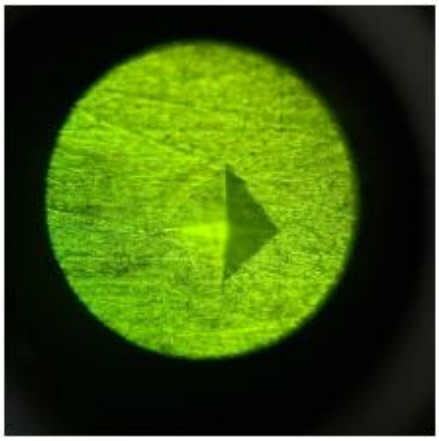
Pengujian XRF	
	Spesimen III (80% Al 6061 + 15% SiC + 5% Ni)
	Spesimen IV (84% Al 2024 + 15% SiC + 1% Ni)

Pengujian XRF	
	Spesimen V (82% Al 2024 + 15% SiC + 3% Ni)
	Spesimen VI (80% Al 2024 + 15% SiC + 5% Ni)

Pengujian XRF	
	Spesimen VII (82% Al 6061 + 15% SiC + 3% Mg)
	Spesimen VIII (82% Al 2024 + 15% SiC + 3% Mg)

Lampiran 4. Dokumentasi pengujian kekerasan

Pengujian Kekerasan	
	Spesimen pengujian kekerasan yang telah dipotong dengan ukuran 5x3 cm.
	Alat uji kekerasan.

Pengujian Kekerasan	
	Pengamatan spesimen pada pengujian kekerasan.
	Titik indentasi pengujian kekerasan.

Lampiran 5. Dokumentasi pengujian tarik

Pengujian Tarik	
	Pembubutan produk cor menjadi spesimen sesuai standar ASTM pengujian tarik.
	Diletakkannya spesimen pengujian ke dalam cekam mesin uji tarik.

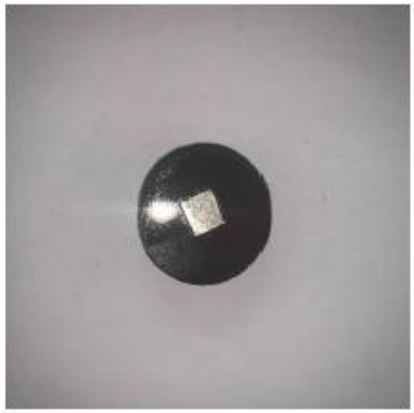
Pengujian Tarik	
	Spesimen uji tarik
	Pengambilan data uji tarik.

Lampiran 6. Dokumentasi pengujian keausan

Pengujian Keausan	
	Spesimen I pengujian keausan yang sedang ditimbang. Spesimen yang digunakan pada pengujian keausan dipotong dengan ukuran 1x1 cm.
	Beban yang digunakan pada pengujian keausan. Beban yang diberikan pada pengujian keausan sebesar 250 g.

Pengujian Keausan	
	Pengamatan pada pengujian keausan.

Lampiran 7. Dokumentasi pengujian metalografi

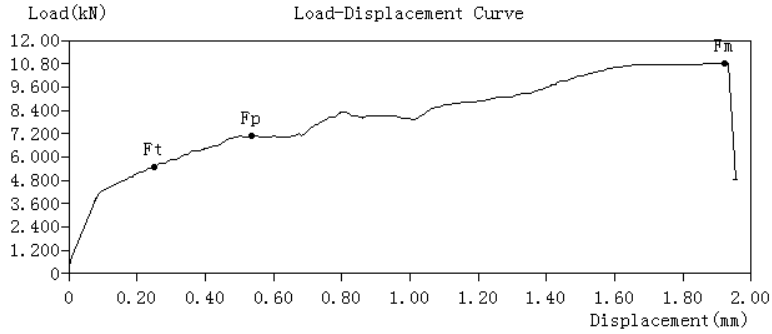
Pengujian Metalografi	
	Produk cor dipotong dengan ukuran 1x1 cm kemudian di beri resin untuk menjadi spesimen pengujian metalografi.
	Proses grinding dan polishing spesimen sebelum dilakukannya pengujian metalografi.

Pengujian Metalografi	
	Proses etsa (*etching*) spesimen metalografi.
	Analisis mikrostuktur dari pengamatan metalografi spesimen.

Lampiran 8. Data pengujian tarik

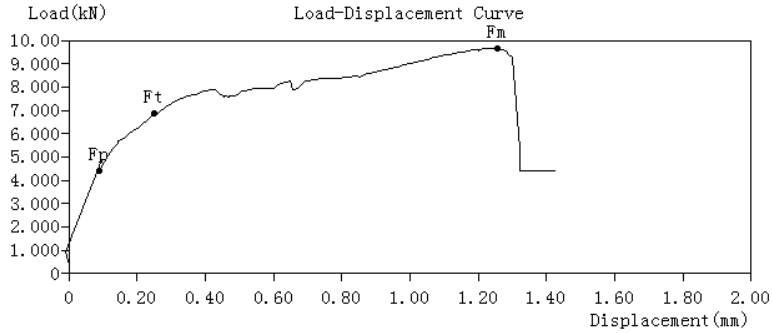
Spesimen 1

Customer		TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.5	So(mm^2)	44.18
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm^2)	/
Z(%)	/	Fm(kN)	10.85
Rm(MPa)	246	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.100
Rp(MPa)	161	Ft(kN)	5.500
Rt(MPa)	124	E(GPa)	9



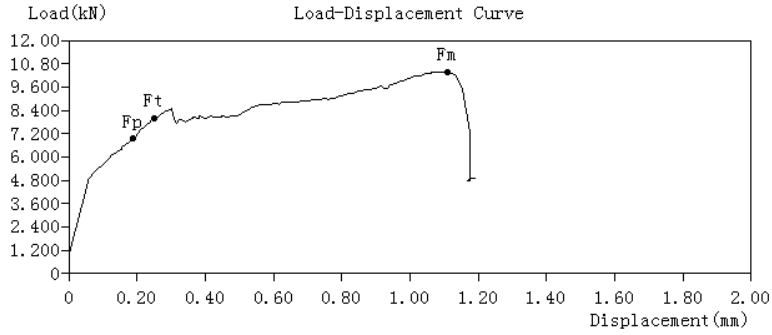
Spesimen 1 B

Customer		TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.5	So(mm^2)	44.18
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm^2)	/
Z(%)	/	Fm(kN)	9.650
Rm(MPa)	218	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	4.400
Rp(MPa)	100	Ft(kN)	6.850
Rt(MPa)	155	E(GPa)	9



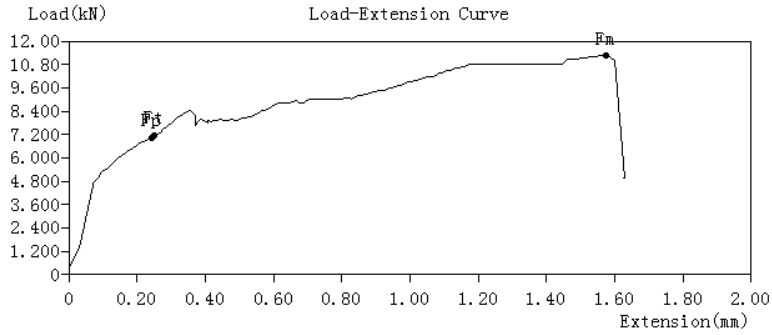
Spesimen 1 C

Customer		TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.5	So(mm^2)	44.18
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm^2)	/
Z(%)	/	Fm(kN)	10.40
Rm(MPa)	235	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	6.950
Rp(MPa)	157	Ft(kN)	8.000
Rt(MPa)	181	E(GPa)	87



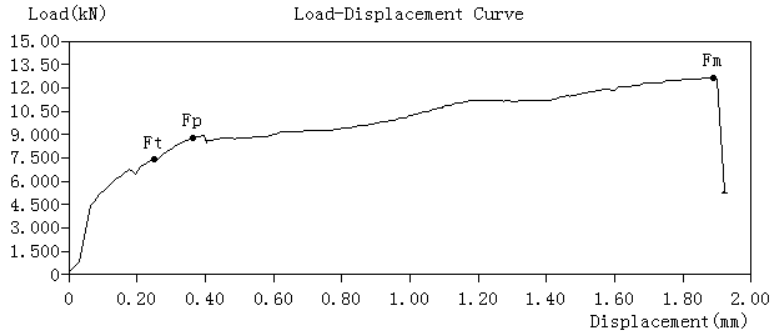
Spesimen 2 A

Customer		TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.5	So(mm^2)	44.18
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm^2)	/
Z(%)	/	Fm(kN)	11.25
Rm(MPa)	255	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.050
Rp(MPa)	160	Ft(kN)	7.150
Rt(MPa)	162	E(GPa)	50



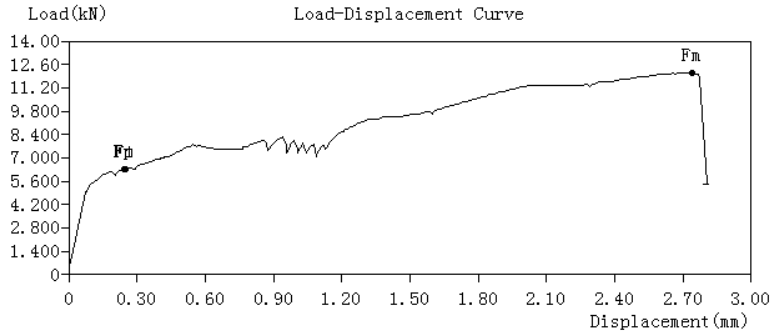
Spesimen 2 B

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.7	So(mm^2)	46.57
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm^2)	/
Z(%)	/	Fm(kN)	12.65
Rm(MPa)	272	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	8.800
Rp(MPa)	189	Ft(kN)	7.400
Rt(MPa)	159	E(GPa)	23



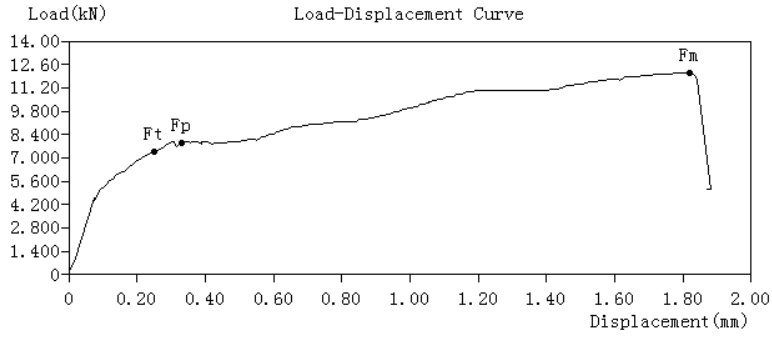
Spesimen 2 C

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.7	So(mm²)	46.57
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	12.10
Rm(MPa)	260	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	6.350
Rp(MPa)	136	Ft(kN)	6.350
Rt(MPa)	136	E(GPa)	33



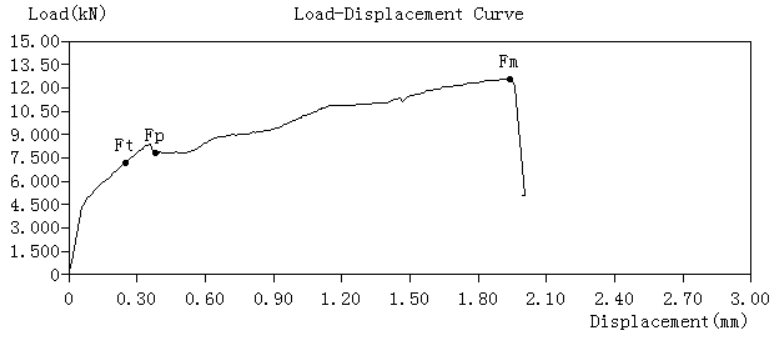
Spesimen 3 A

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.2	So(mm²)	40.72
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	12.10
Rm(MPa)	297	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.900
Rp(MPa)	194	Ft(kN)	7.400
Rt(MPa)	182	E(GPa)	25



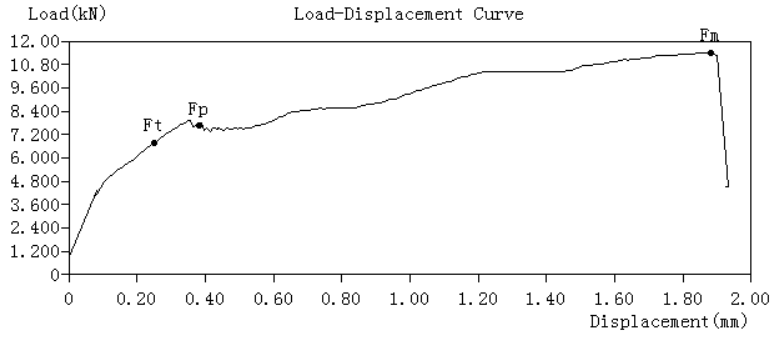
Spesimen 3 B

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.5	So(mm²)	44.18
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	12.55
Rm(MPa)	284	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.850
Rp(MPa)	178	Ft(kN)	7.200
Rt(MPa)	163	E(GPa)	16



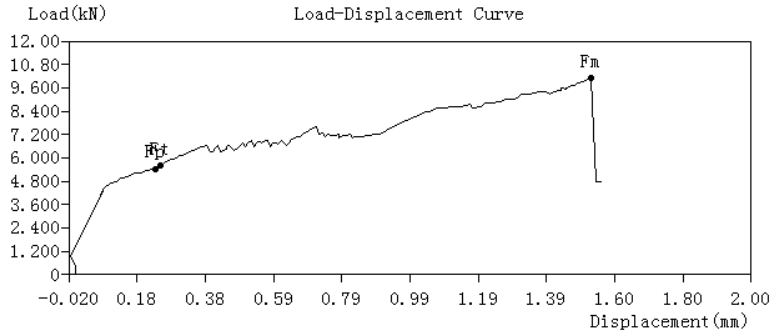
Spesimen 3 C

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.4	So(mm²)	43.01
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	11.40
Rm(MPa)	265	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.650
Rp(MPa)	178	Ft(kN)	6.800
Rt(MPa)	158	E(GPa)	20



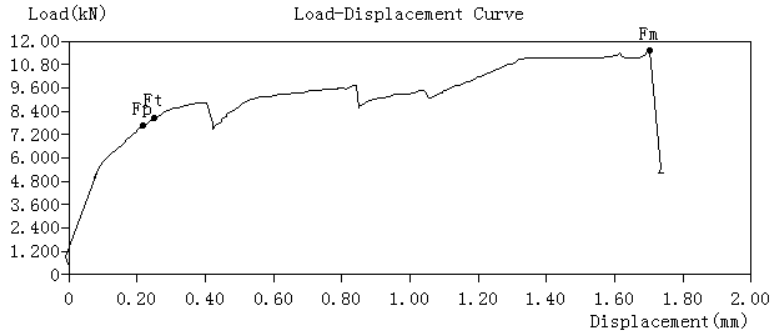
Spesimen 4 A

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.2	So(mm²)	40.72
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	10.10
Rm(MPa)	248	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	5.450
Rp(MPa)	134	Ft(kN)	5.600
Rt(MPa)	138	E(GPa)	44



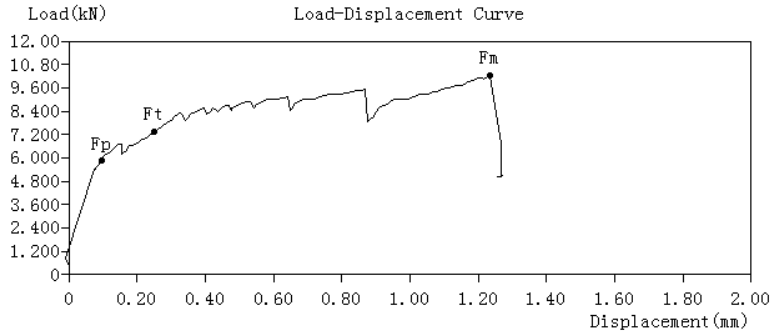
Spesimen 4 B

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	8.7	So(mm^2)	59.45
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm^2)	/
Z(%)	/	Fm(kN)	11.50
Rm(MPa)	193	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.650
Rp(MPa)	129	Ft(kN)	8.050
Rt(MPa)	135	E(GPa)	50



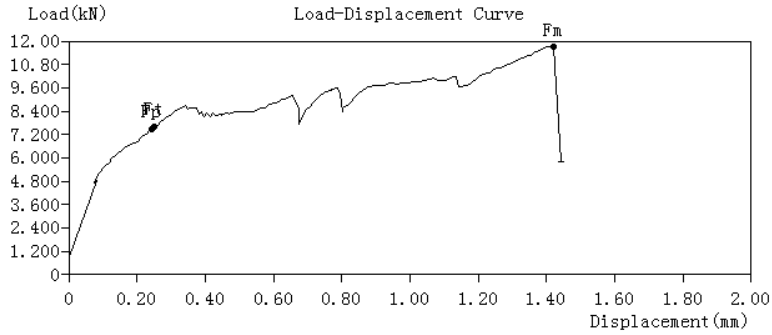
Spesimen 4 C

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.2	So(mm²)	40.72
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	10.25
Rm(MPa)	252	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	5.850
Rp(MPa)	144	Ft(kN)	7.350
Rt(MPa)	181	E(GPa)	/



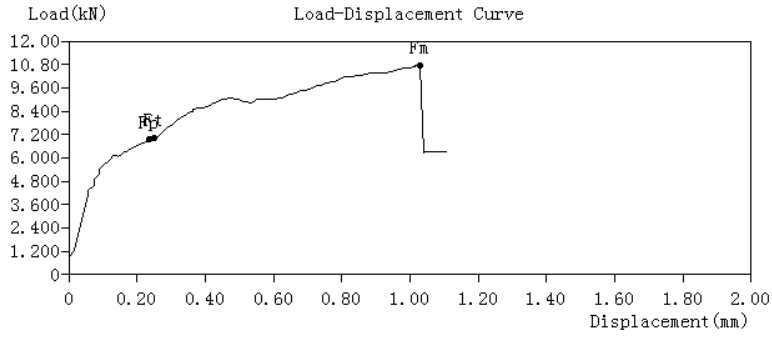
Spesimen 5 A

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.3	So(mm²)	41.85
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	11.70
Rm(MPa)	280	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.500
Rp(MPa)	179	Ft(kN)	7.600
Rt(MPa)	182	E(GPa)	58



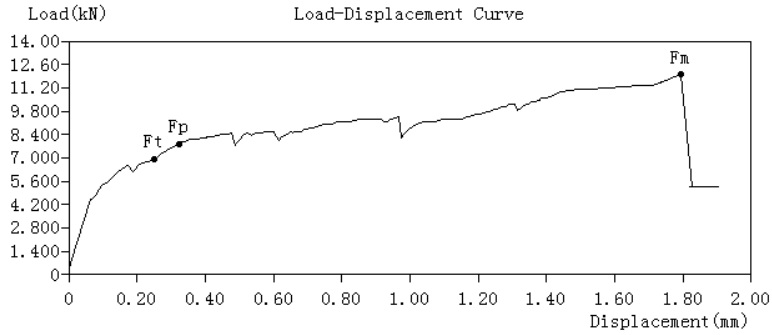
Spesimen 5 B

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.5	So(mm²)	44.18
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	10.75
Rm(MPa)	243	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	6.950
Rp(MPa)	157	Ft(kN)	7.050
Rt(MPa)	160	E(GPa)	38



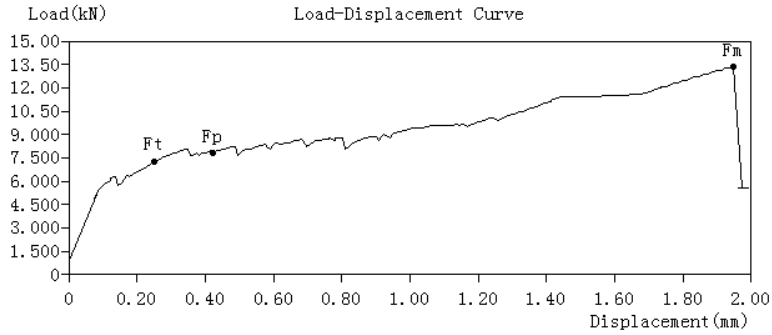
Spesimen 5 C

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.8	So(mm²)	47.78
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	12.00
Rm(MPa)	251	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.850
Rp(MPa)	164	Ft(kN)	6.950
Rt(MPa)	145	E(GPa)	22



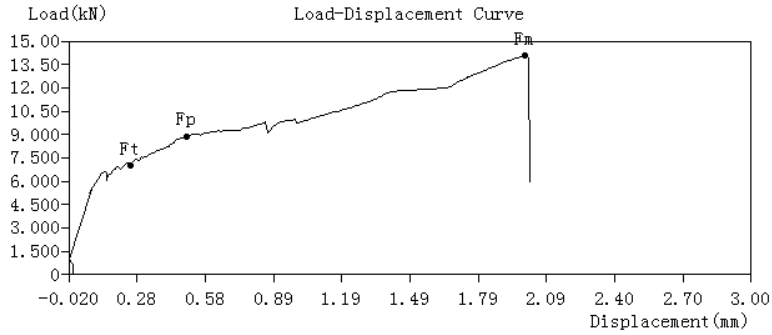
Spesimen 6 A

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.8	So(mm^2)	47.78
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm^2)	/
Z(%)	/	Fm(kN)	13.35
Rm(MPa)	279	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	7.800
Rp(MPa)	163	Ft(kN)	7.250
Rt(MPa)	152	E(GPa)	11



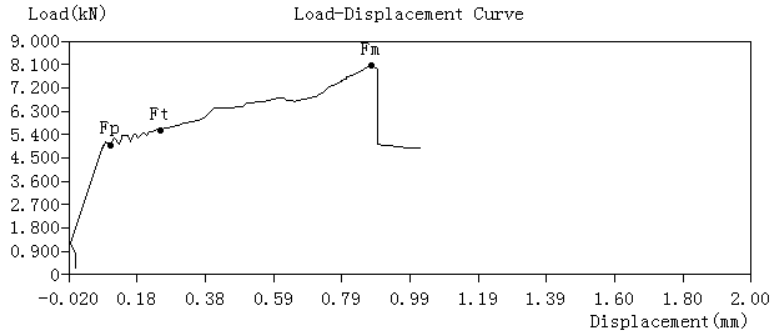
Spesimen 6 B

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	8.0	So(mm²)	50.27
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	14.05
Rm(MPa)	279	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	8.900
Rp(MPa)	177	Ft(kN)	7.000
Rt(MPa)	139	E(GPa)	10



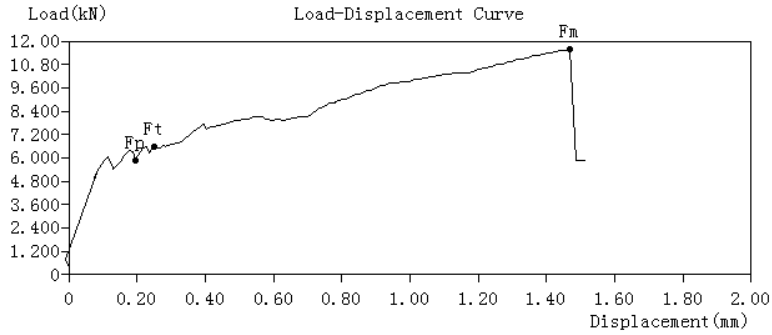
Spesimen 6 C

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	8.0	So(mm²)	50.27
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	8.050
Rm(MPa)	160	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	5.000
Rp(MPa)	99	Ft(kN)	5.550
Rt(MPa)	110	E(GPa)	10



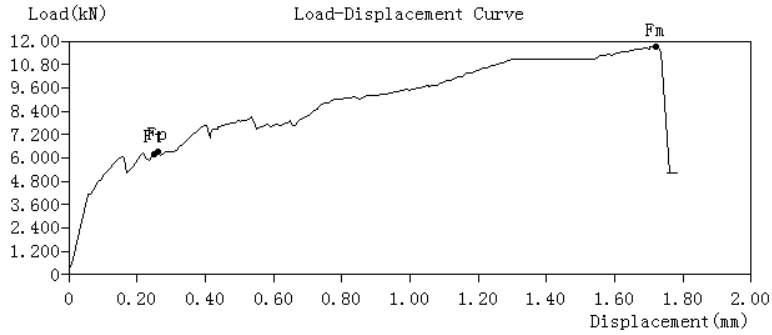
Spesimen 7 A

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.5	So(mm²)	44.18
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	11.60
Rm(MPa)	263	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	5.900
Rp(MPa)	134	Ft(kN)	6.600
Rt(MPa)	149	E(GPa)	68



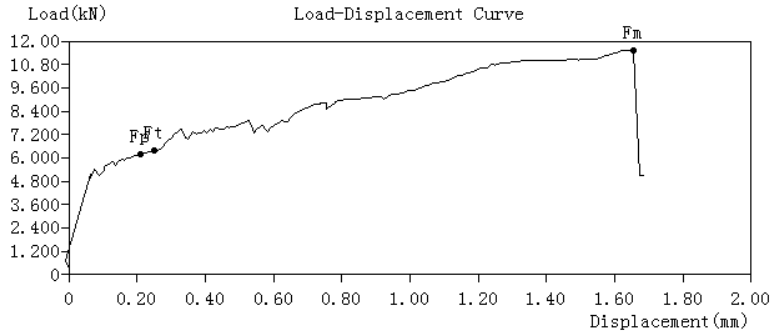
Spesimen 7 B

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.2	So(mm²)	40.72
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	11.70
Rm(MPa)	287	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	6.350
Rp(MPa)	156	Ft(kN)	6.200
Rt(MPa)	152	E(GPa)	26



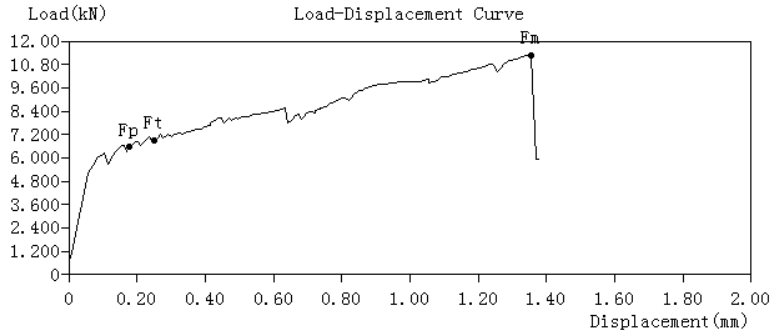
Spesimen 7 C

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.4	So(mm²)	43.01
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	11.55
Rm(MPa)	269	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	6.200
Rp(MPa)	144	Ft(kN)	6.400
Rt(MPa)	149	E(GPa)	61



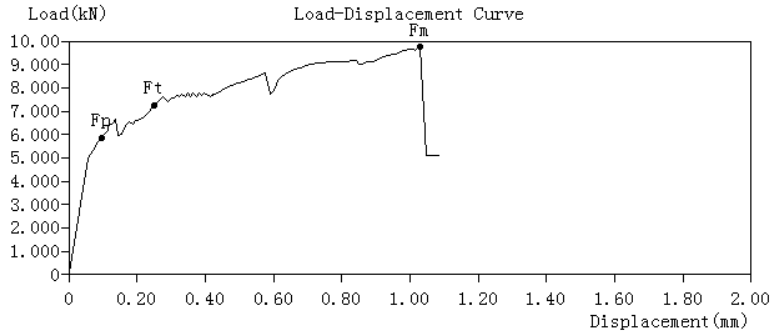
Spesimen 8 A

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.0	So(mm²)	38.48
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	11.30
Rm(MPa)	294	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	6.550
Rp(MPa)	170	Ft(kN)	6.900
Rt(MPa)	179	E(GPa)	102



Spesimen 8 B

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	7.0	So(mm²)	38.48
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	9.750
Rm(MPa)	253	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	5.850
Rp(MPa)	152	Ft(kN)	7.250
Rt(MPa)	188	E(GPa)	/



Spesimen 8 C

Customer	spesimen 2	TestDate	2015/1/1 星期四
Coil No/Packet No		Type	Circle
Size(mm)	8.4	So(mm²)	55.42
Lo(mm)	20	Lu(mm)	
A(%)	/	Su(mm²)	/
Z(%)	/	Fm(kN)	10.30
Rm(MPa)	186	FeH(kN)	/
ReH(MPa)	/	FeL(kN)	/
ReL(MPa)	/	Fp(kN)	5.950
Rp(MPa)	107	Ft(kN)	5.100
Rt(MPa)	92	E(GPa)	18