

THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

ISO 9001 - CERTIFIED BY MASCI

=====

MILL TEST CERTIFICATE

CUSTOMER : CMC AUSTRALIA PTY LIMITED
 COMMODITY : PC STRAND 15.2-1830N
 TYPE AND SIZE: 7 WIRE ORDINARY 15.2-1830N, LOW RELAX, Z-LAY
 STANDARD : AS/NZS4672.1:2007

PAGE NO.: 1 / 3

DATE : 18/11/11

R/G : 055890

L/C : AI2011387541

L/C Date: 111026

INV. : EXP.113/11

DESCRIPTION: 7-WIRE LOW RELAXATION STRESS RELIEVED
 RIGHT HAND LAY (RHL) STRAND TO AS/NZS4672:2007
 AS PER CMC ORDER NUMBERS P227363, FOB
 LAEM CHABANG, THAILAND.
 PC STRAND 15.2 MM 1830 RHL

ISSUE BY:

Approved by


(SUCHART TECHATIUMCHAN)
 AUTHORIZED SIGNATURE

No	Charge	Coil	STRAND	SECTIONAL	BREAKING	PROOF	P/D	Agt	UNIT WT.	WEIGHT	APPROX
			DIAMETER	OF AREA	FORCE	FORCE 0.1					
			(mm)	(sq.mm)	(kN)	(kN)		(%)	(g/m)	(kgs.)	(m)
Specification	Min	-	-	-	261.00	214.00	12.00	3.50	1099.6	-	-
	Max	-	-	-	-	-	18.00	-	1166.9	-	-

1	SG000079	0301	15.35	142.62	281.17	248.55	13.6	6.89	1121.81	2,952	2,631
2	SG000079	0302	15.37	142.38	282.35	249.13	13.3	7.00	1122.21	2,744	2,445
3	SG000079	0303	15.37	142.38	281.95	255.50	13.2	8.74	1122.33	2,920	2,602
4	SG000079	0304	15.35	142.06	282.44	244.63	13.4	7.76	1121.47	2,952	2,632
5	SG000079	0305	15.35	142.14	280.39	241.49	13.4	7.39	1121.74	2,948	2,628
6	SG000079	0306	15.35	142.06	281.17	244.33	13.4	9.16	1120.93	2,740	2,444
7	SG000076	0371	15.42	143.66	283.62	248.25	13.4	6.95	1128.77	3,186	2,823
8	SG000076	0372	15.42	143.74	283.52	245.22	13.1	8.06	1129.07	3,184	2,820
9	SG000079	0211	15.39	143.10	281.76	246.49	13.3	7.61	1126.70	2,962	2,629
10	SG000079	0212	15.40	142.86	282.64	245.12	13.1	8.28	1128.83	2,964	2,626
11	SG000079	0213	15.39	142.78	282.44	245.41	13.1	7.70	1128.50	2,964	2,627
12	SG000079	0214	15.39	142.86	282.54	248.35	13.1	7.66	1125.42	2,962	2,632
13	SG000079	0215	15.39	141.58	280.78	243.94	13.2	7.07	1127.65	2,754	2,442
14	SG000079	0216	15.41	143.10	283.13	245.80	13.2	7.61	1130.03	2,754	2,437

THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

ISO 9001 - CERTIFIED BY MASCI

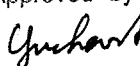
MILL TEST CERTIFICATE

CUSTOMER : CMC AUSTRALIA PTY LIMITED
 COMMODITY : PC STRAND 15.2-1830N
 TYPE AND SIZE: 7 WIRE ORDINARY 15.2-1830N, LOW RELAX, Z-LAY
 STANDARD : AS/NZS4672.1:2007

PAGE NO.: 2 / 3
 DATE : 18/11/11
 R/G : 055890
 L/C : AI2011387541
 L/C Date: 111026

DESCRIPTION: 7-WIRE LOW RELAXATION STRESS RELIEVED
 RIGHT HAND LAY (RHL) STRAND TO AS/NZS4672:2007
 AS PER CMC ORDER NUMBERS P227363, FOB
 LAEM CHABANG, THAILAND.
 PC STRAND 15.2 MM 1830 RHL

INV. : EXP.113/11
 ISSUE BY:

Approved by


(SUCHART TECHATIUMCHAN)
 AUTHORIZED SIGNATURE

No	Charge	Coil	STRAND DIAMETER (mm)	SECTIONAL OF AREA (sq.mm)	BREAKING PROOF FORCE (kN)	FORCE 0.1 (kN)	P/D	Agt (%)	UNIT WT. (g/m)	WEIGHT (kgs.)	APPROX (m)
Specification	Min	-	-	-	261.00	214.00	12.00	3.50	1099.6	-	-
	Max	-	-	-	-	-	18.00	-	1166.9	-	-
15	SG000076	0373	15.41	143.66	284.50	245.12	13.1	7.82	1129.57	3,184	2,819
16	SG000076	0374	15.42	143.66	283.52	246.39	13.2	8.26	1129.20	3,184	2,820
** MEAN **					282.37	** TOTAL **		47,354			

Remark : P/D = lay Ratio, Agt = Total Elongation at max force

THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

ISO 9001 - CERTIFIED BY MASCI

=====

MILL TEST CERTIFICATE

CUSTOMER : CMC AUSTRALIA PTY LIMITED

COMMODITY : PC STRAND 15.2-1830N

TYPE AND SIZE: 7 WIRE ORDINARY 15.2-1830N, LOW RELAX, Z-LAY

STANDARD : AS/NZS4672.1:2007

PAGE NO.: 3 / 3

DATE : 18/11/11

R/G : 055890

L/C : AI2011387541

L/C Date: 111026

INV. : EXP.113/11

DESCRIPTION: 7-WIRE LOW RELAXATION STRESS RELIEVED

ISSUE BY:

RIGHT HAND LAY (RHL) STRAND TO AS/NZS4672:2007

AS PER CMC ORDER NUMBERS P227363, FOB

LAEM CHABANG, THAILAND.

PC STRAND 15.2 MM 1830 RHL

Approved by

Yuchart

(SUCHART TECHATIUMCHAN)

AUTHORIZED SIGNATURE

***** Chemical Composition *****

Charge No	C	Si	Mn	P	S	Al	Cr
SG000076	0.810	0.260	0.620	0.011	0.004	-	0.340
SG000079	0.820	0.250	0.630	0.013	0.003	-	0.340



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

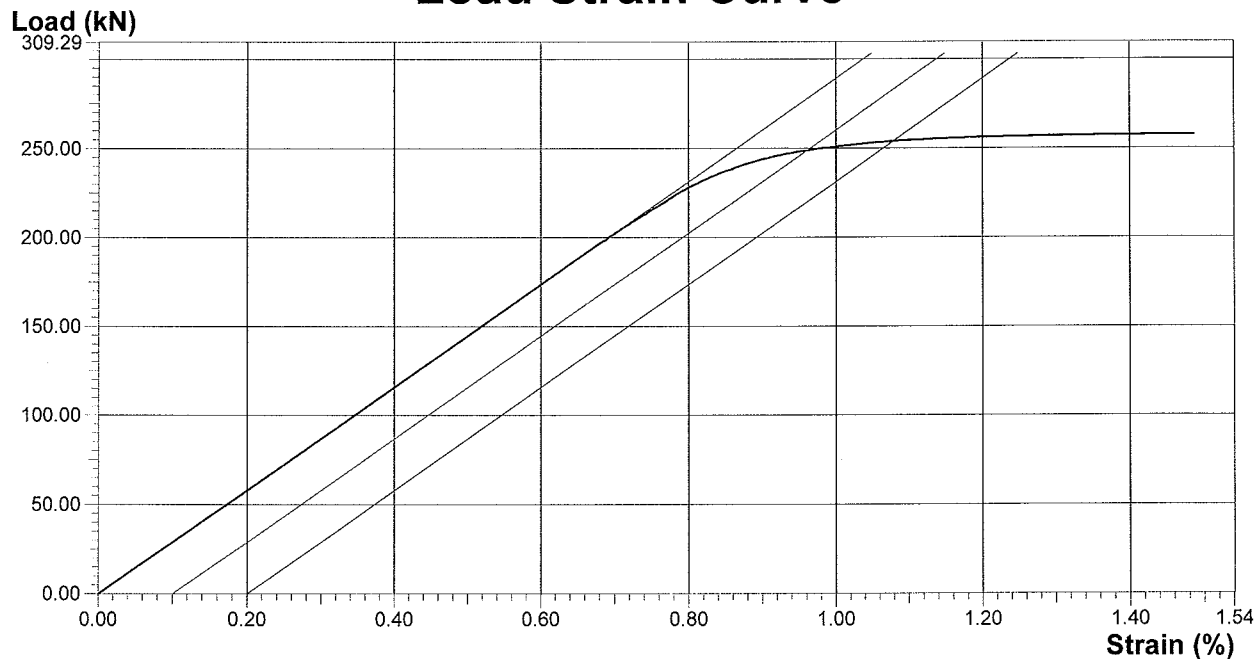
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY.
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0301

Test M/C : TT103L
Extensometer : EX005L

Date : 31-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.35	281.17	1966.22	248.55	254.03	251.00	6.89	202.17

Prepared by

Signature

Approved by

Signature

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

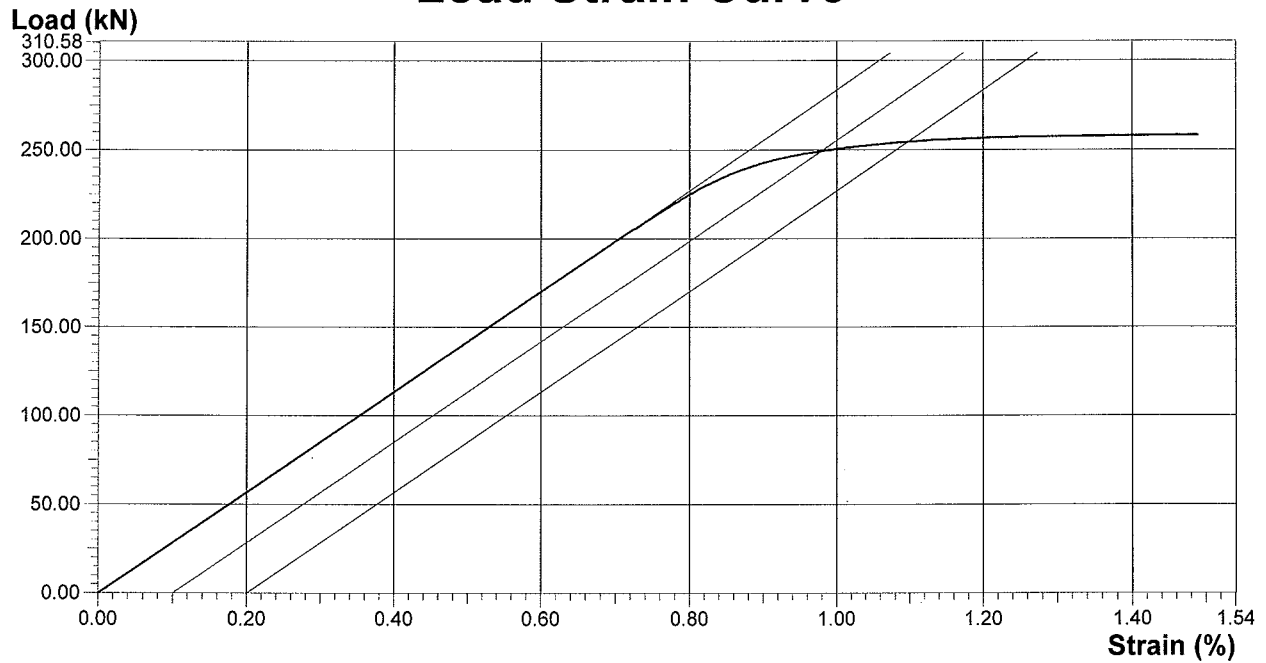
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY.
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0302

Test M/C : TT103L
Extensometer : EX005L

Date : 31-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.37	282.35	1974.44	249.13	254.52	250.60	7.00	198.31

Prepared by

S. J. J.

Approved by

Y. J. J.

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY.
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0303

Test M/C : TT103L
Extensometer : EX005L

Date : 31-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.37	281.95	1971.70	255.50	257.76	255.89	8.74	202.09

Prepared by

Signature

Approved by

Signature

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

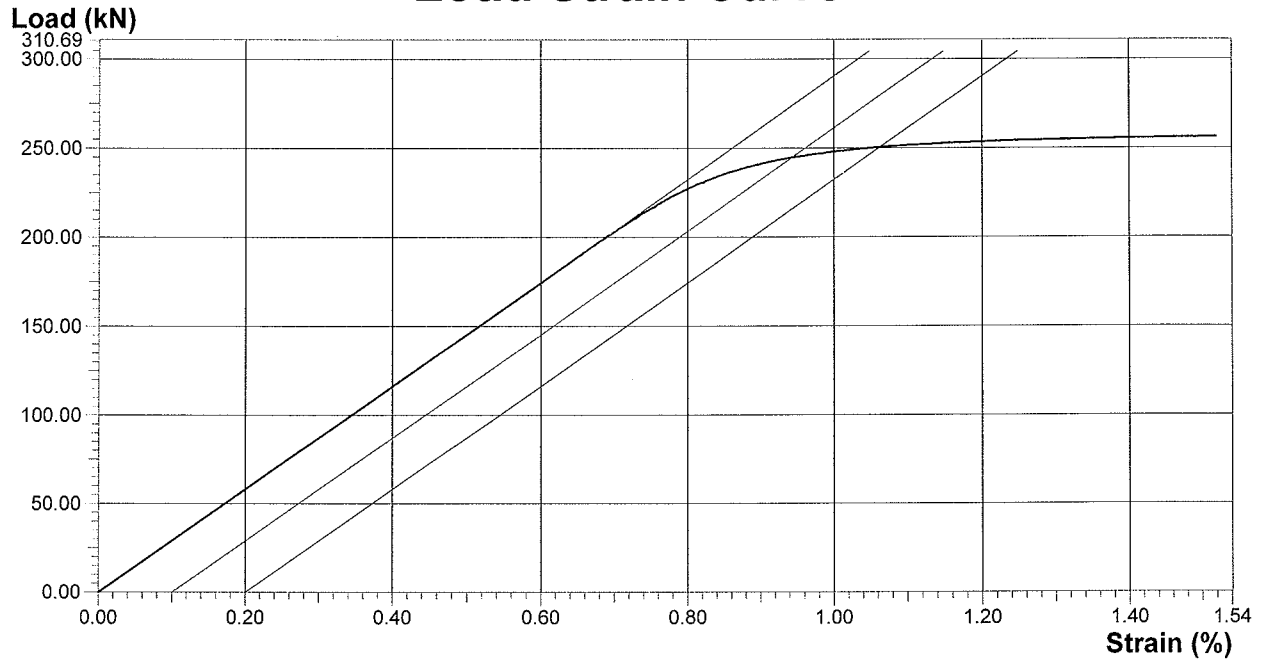
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0304

Test M/C : TT103L
Extensometer : EX005L

Date : 01-11-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.35	282.44	1975.13	244.63	250.60	248.06	7.76	203.08

Prepared by

MUJIT

Approved by

Chirawat

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

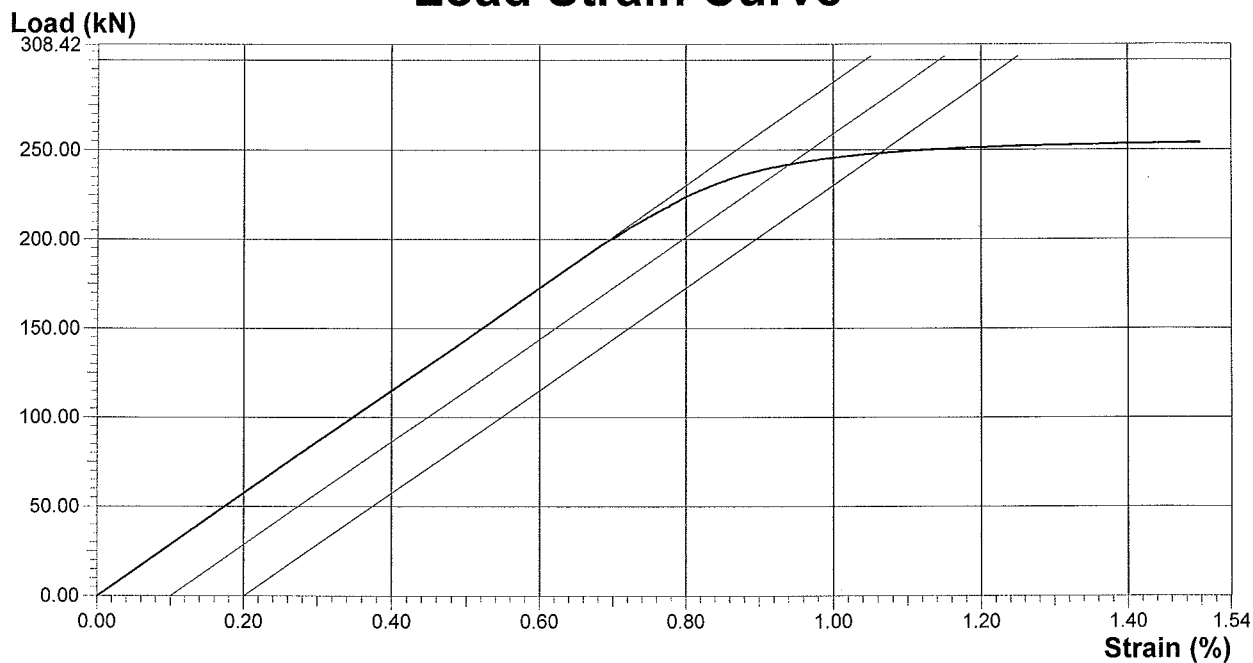
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0305

Test M/C : TT103L
Extensometer : EX005L

Date : 01-11-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.35	280.39	1960.74	241.49	248.06	245.71	7.39	201.11

Prepared by

M. J. J. J.

Approved by

Quikart

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

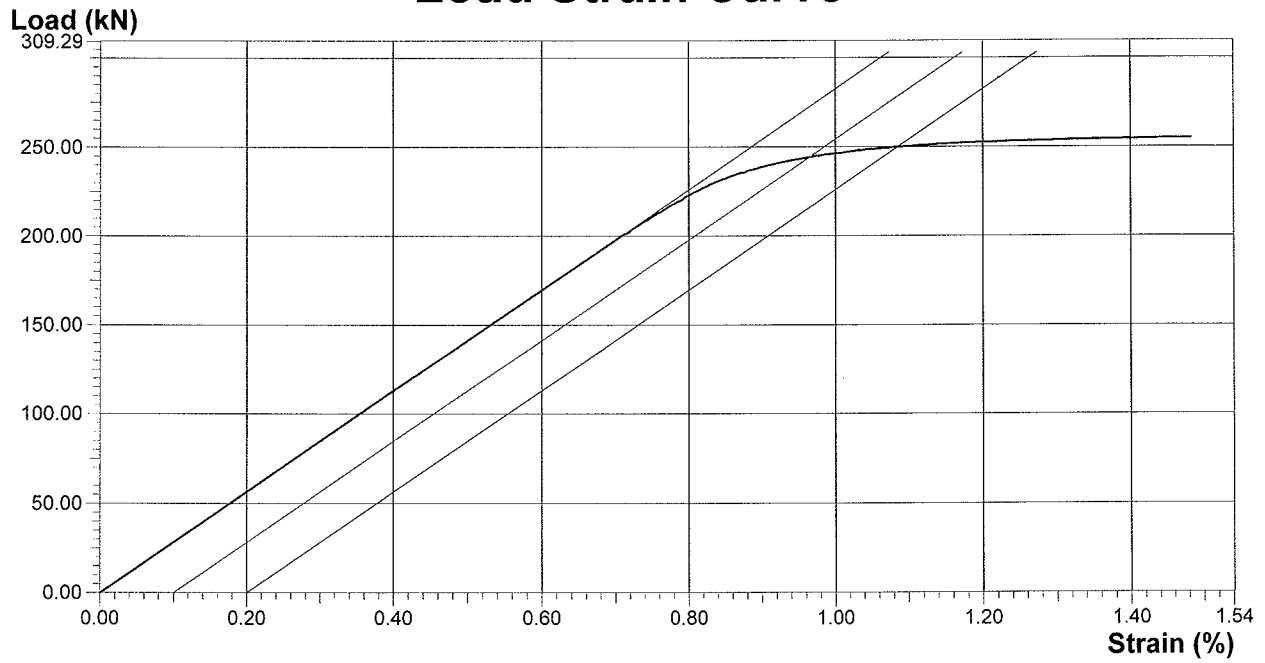
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0306

Test M/C : TT103L
Extensometer : EX005L

Date : 01-11-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.35	281.17	1966.22	244.33	249.92	246.29	9.16	197.53

Prepared by

M. J. J.

Approved by

Quibert

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

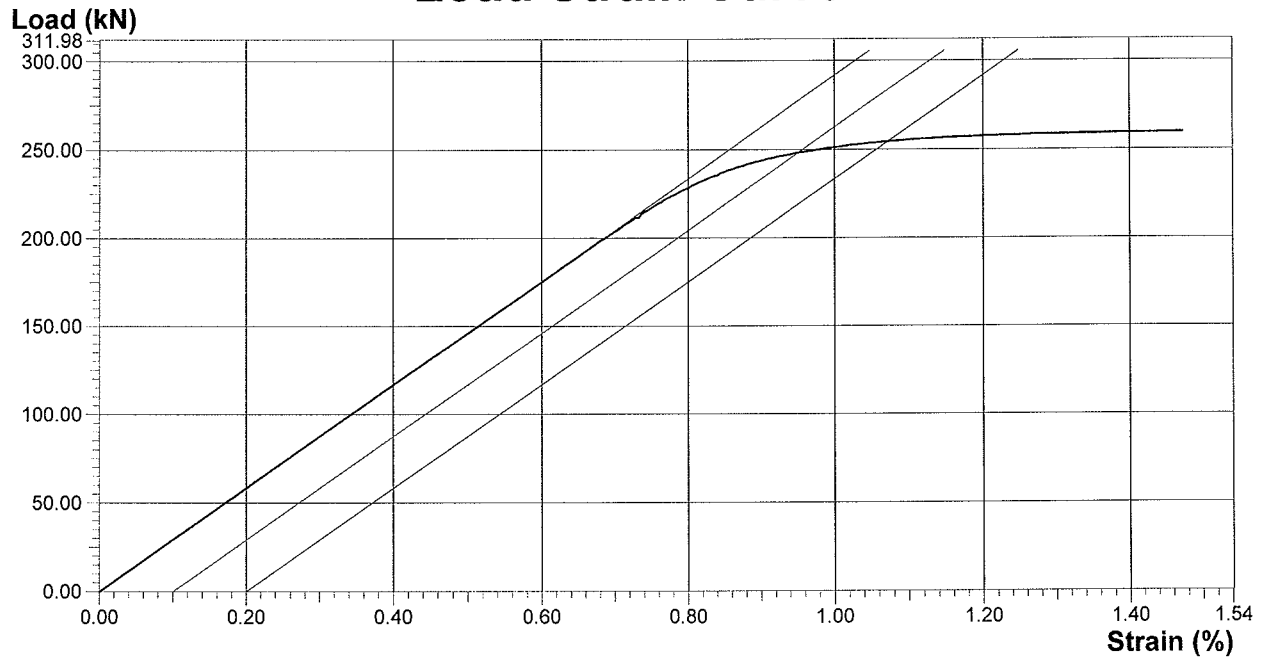
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000076
Coil No. : 0371

Test M/C : TT103L
Extensometer : EX005L

Date : 30-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.42	283.62	1983.35	248.25	254.52	251.29	6.95	204.01

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

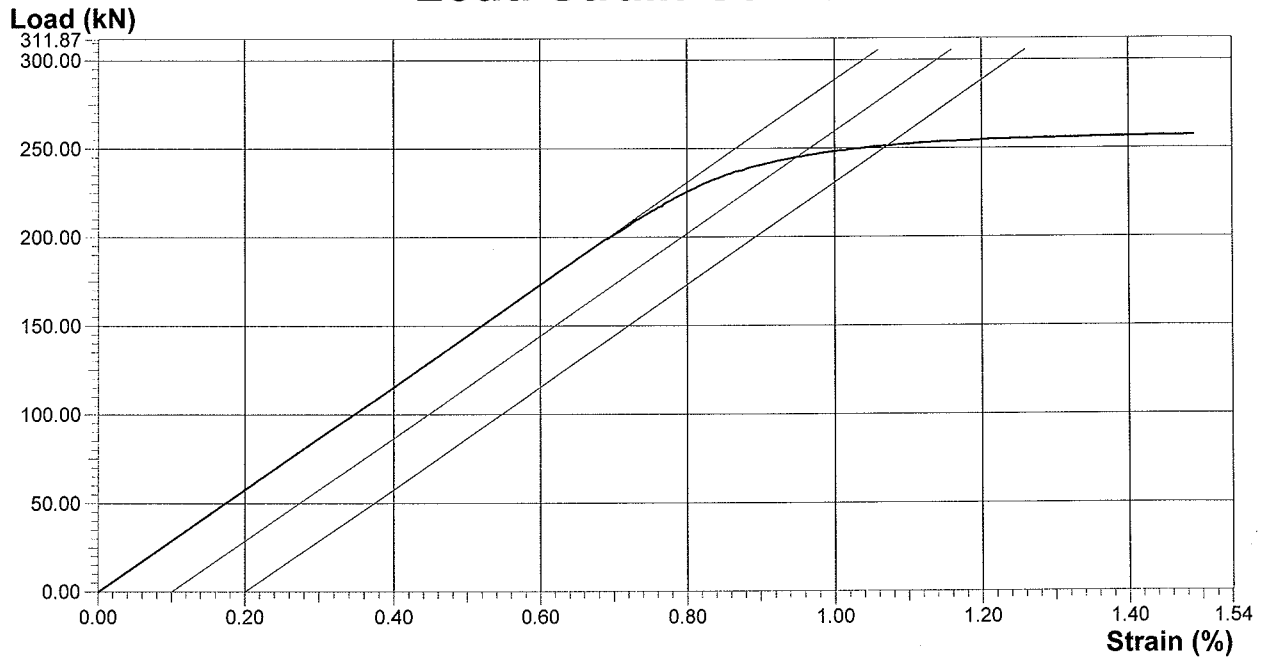
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000076
Coil No. : 0372

Test M/C : TT103L
Extensometer : EX005L

Date : 30-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.42	283.52	1982.67	245.22	251.39	248.35	8.06	201.78

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

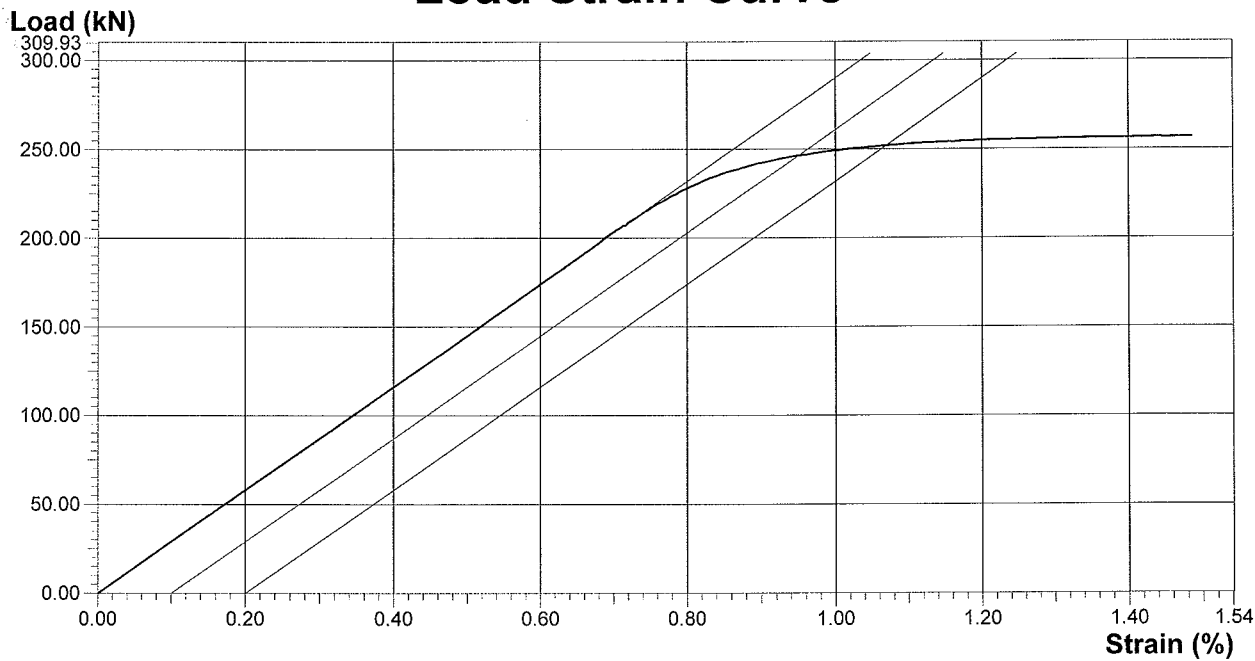
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0211

Test M/C : TT103L
Extensometer : EX005L

Date : 29-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.39	281.76	1970.33	246.49	252.07	249.23	7.61	202.67

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

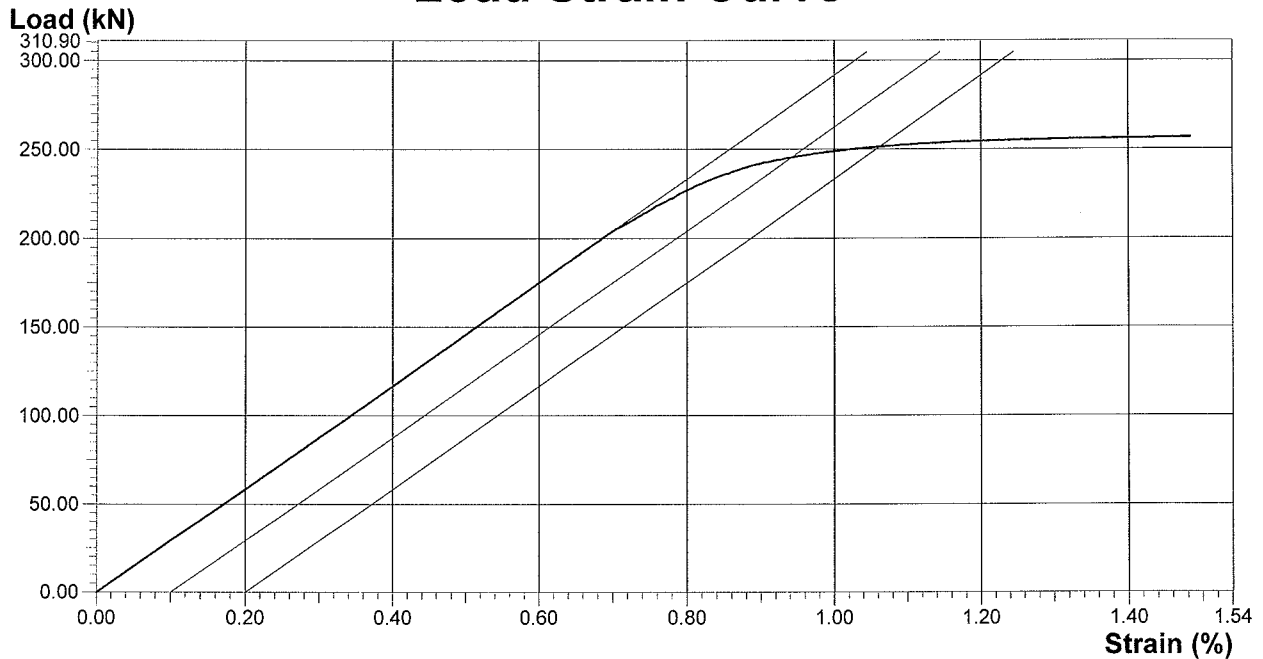
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0212

Test M/C : TT103L
Extensometer : EX005L

Date : 29-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.40	282.64	1976.50	245.12	251.49	249.04	8.28	203.93

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

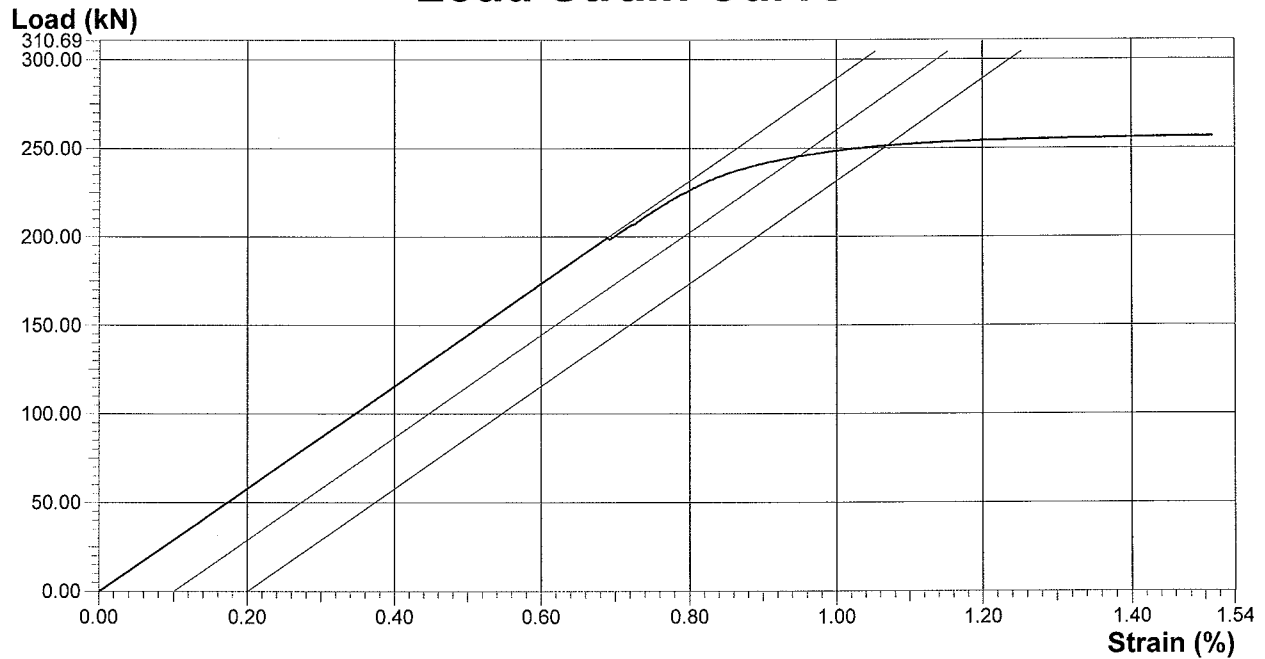
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0213

Test M/C : TT103L
Extensometer : EX005L

Date : 29-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.39	282.44	1975.13	245.41	251.29	248.45	7.70	202.21

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

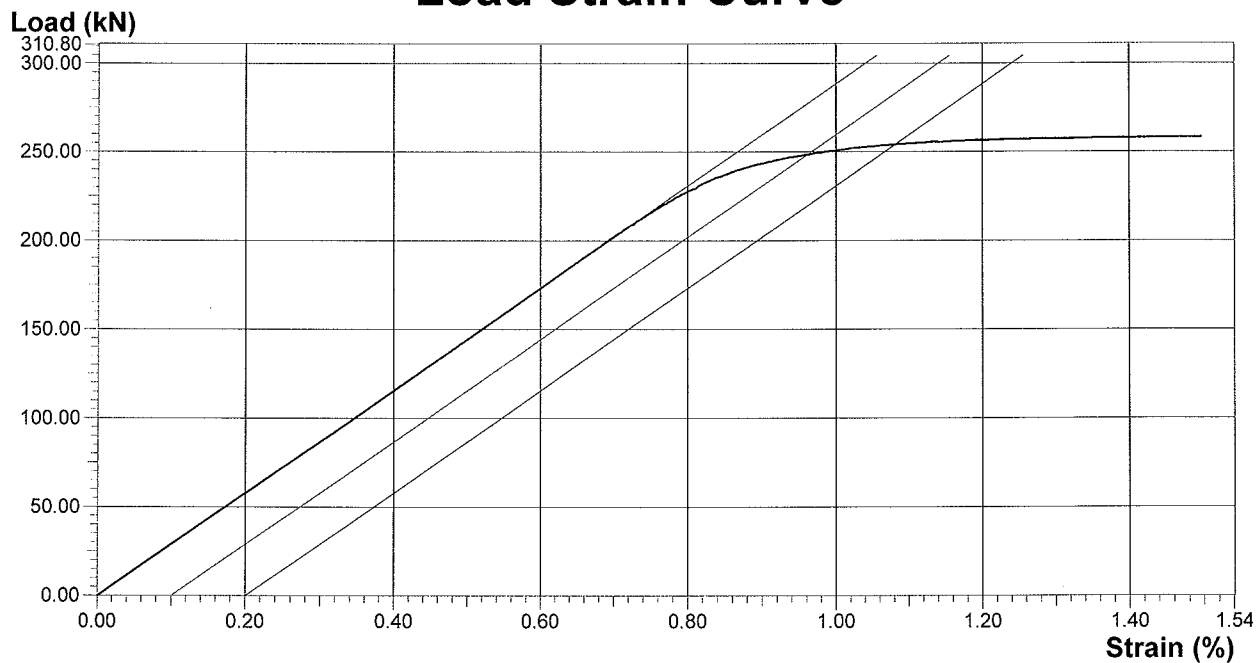
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0214

Test M/C : TT103L
Extensometer : EX005L

Date : 29-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.39	282.54	1975.81	248.35	254.13	250.70	7.66	201.74

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

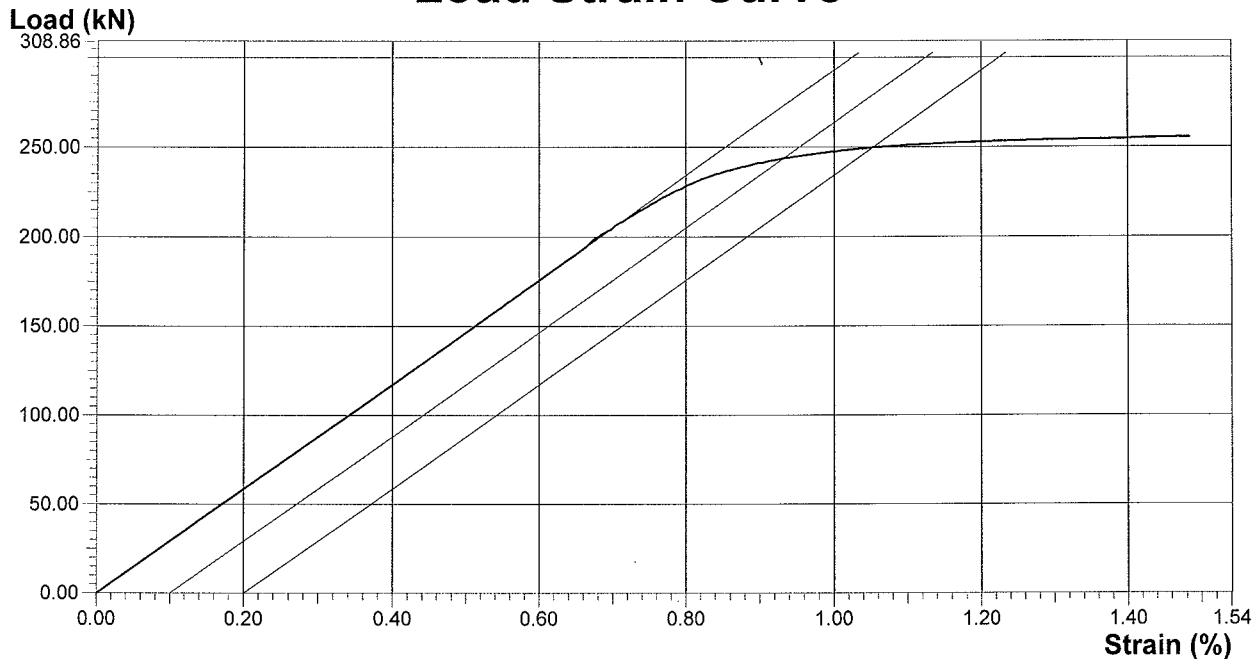
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0215

Test M/C : TT103L
Extensometer : EX005L

Date : 29-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.39	280.78	1963.48	243.94	249.53	247.37	7.07	204.75

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

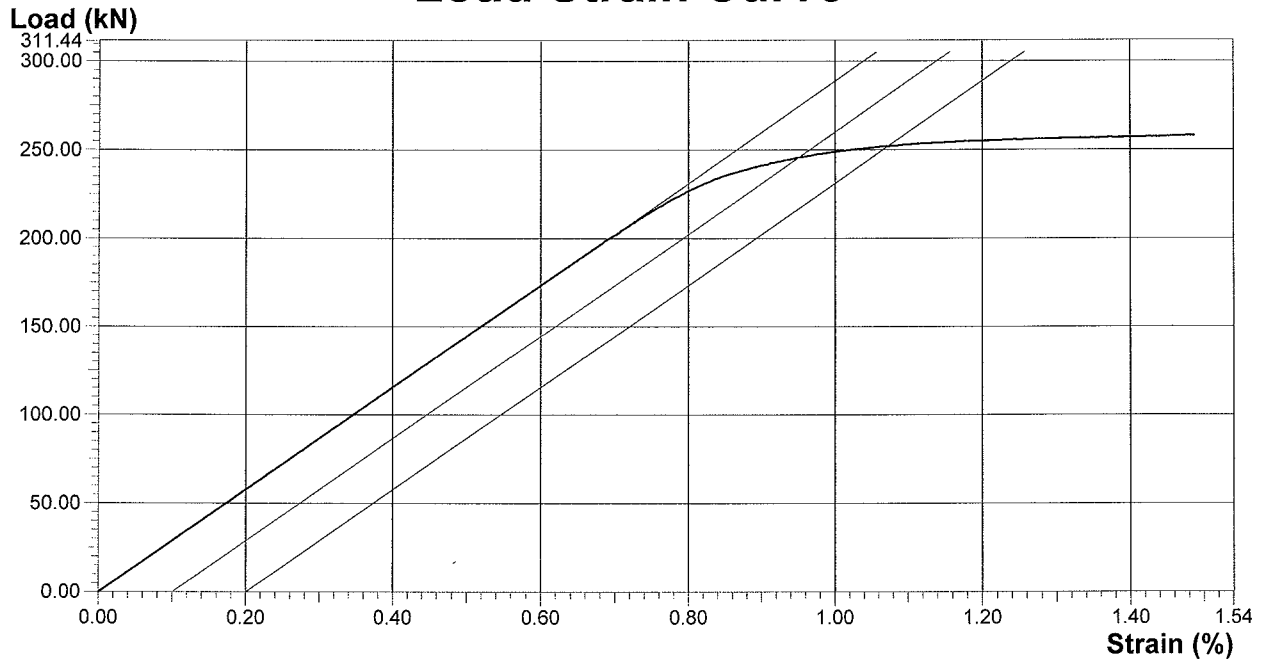
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000079
Coil No. : 0216

Test M/C : TT103L
Extensometer : EX005L

Date : 29-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.41	283.13	1979.92	245.80	251.88	249.04	7.61	201.98

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

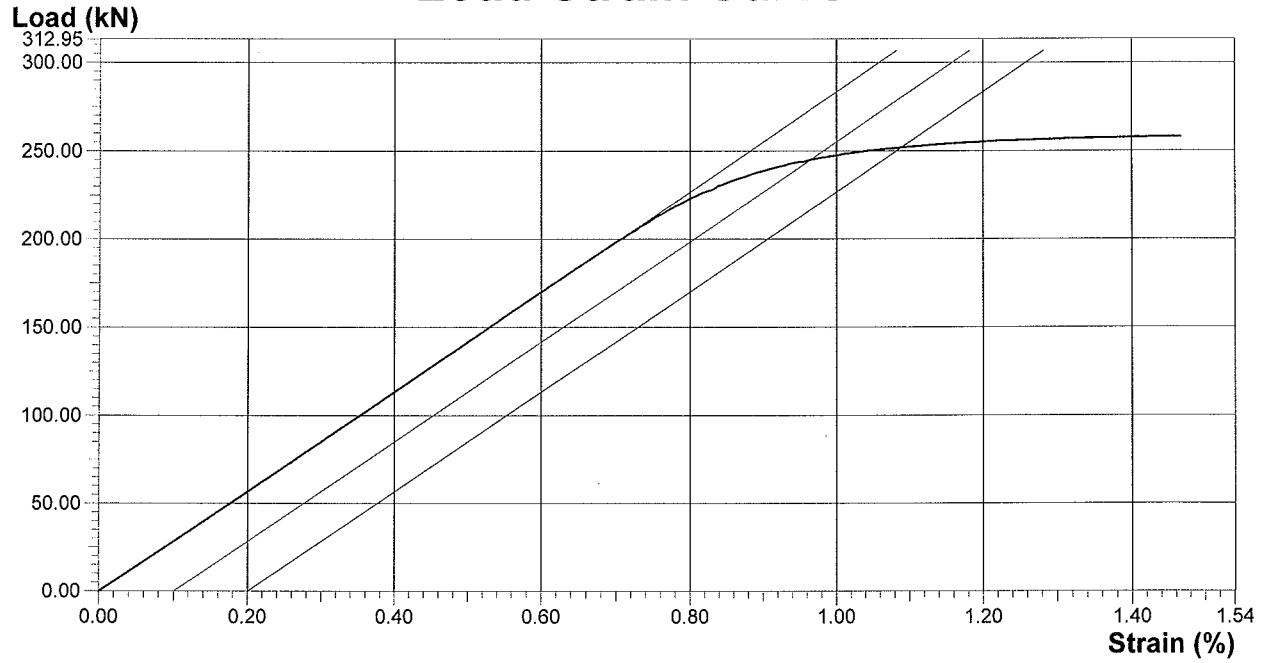
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000076
Coil No. : 0373

Test M/C : TT103L
Extensometer : EX005L

Date : 30-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.41	284.50	1989.52	245.12	251.98	247.47	7.82	198.17

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory



THAI WIRE PRODUCTS PUBLIC COMPANY LIMITED

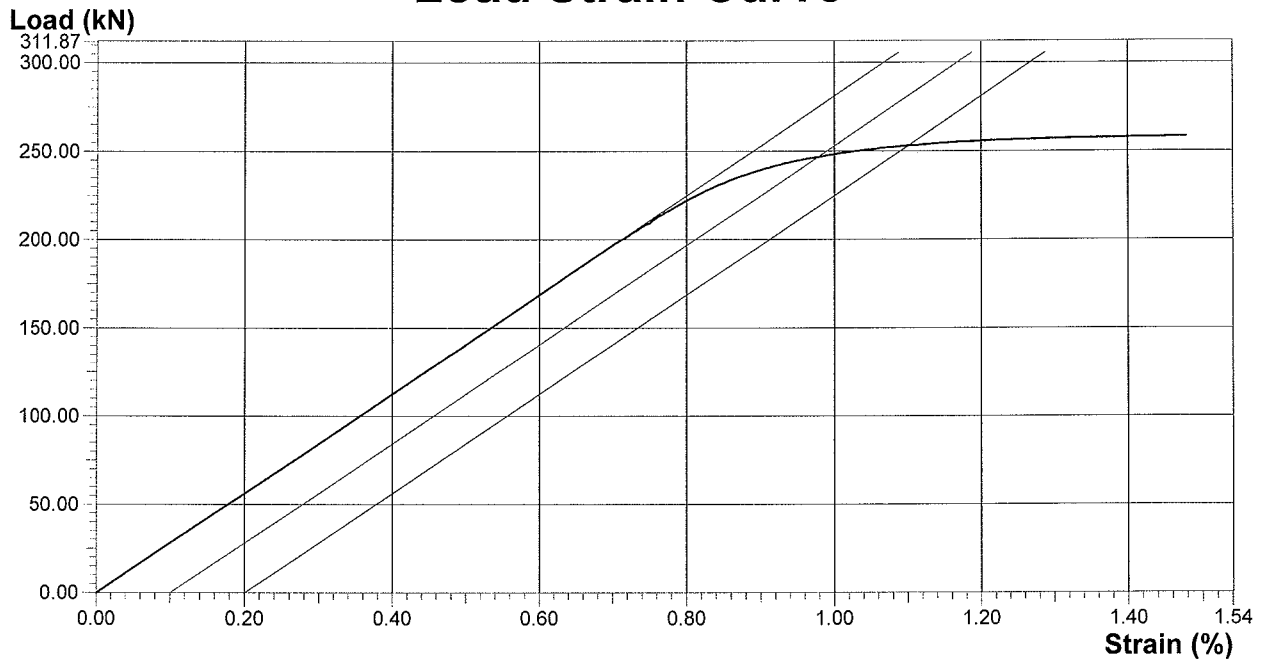
OFFICE : 99/2 MOO 8 ZEER STREET BUILDING 7th FLOOR, LAMLOOKKA RD., LAMLOOKKA, PATHUMTHANI 12130, THAILAND.

TEL. (662) 992-6867 FAX. (662) 992-6870

FACTORY : 4, I-5 RD., MAPTHAPHUT INDUSTRIAL ESTATE, MAPTHAPHUT, MUANG, RAYONG 21150, THAILAND.

TEL. (6638) 684610-3 FAX. (6638) 684614

Load Strain Curve



Tensile Strength Test

COMMODITY : PCS 15.2-1830N-Z LAY
TYPE : 7 WIRE ORDINARY-LOW RELAXATION
SIZE : DIA. 15.2 mm.
STANDARD : AS/NZS 4672.1-2007

Charge No. : SG000076
Coil No. : 0374

Test M/C : TT103L
Extensometer : EX005L

Date : 30-10-2011

Diameter mm	Max. force kN	Tensile N/mm ²	Proof force 0.1 kN	Proof force 0.2 kN	Proof force 1.0 kN	Elongation %	Modulus kN/mm ²
15.42	283.52	1982.67	246.39	253.05	248.25	8.26	196.52

Prepared by

Approved by

Remark : This report may not be reproduced except in full unless the permission for reproduction has been obtained in writing from the laboratory