

# PROGRESS WELDED MESH SDN. BHD.

(1015640-A)

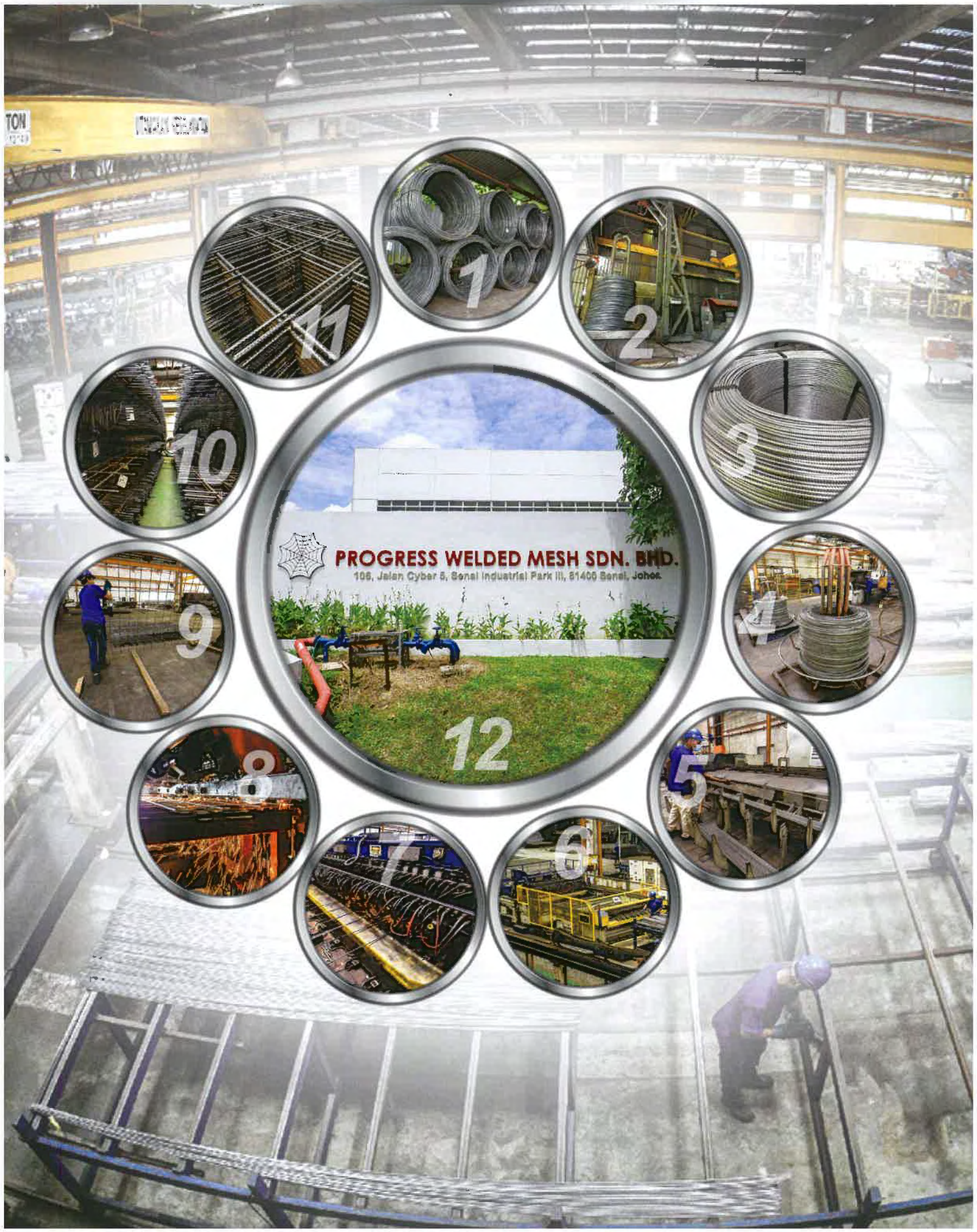


## Standard & Special Steel Fabric





# PRODUCTION TOUR



**PROGRESS WELDED MESH SDN. BHD.**  
106, Jalan Cyber 5, Senal Industrial Park III, 81400 Senal, Johor.

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# Company Profile

**Progress Welded Mesh Sdn. Bhd.** was incorporated in September 2012 and commenced its maiden operation on March 2013. The plant is strategically located in a matured industrial zone at Senai, Johor, Malaysia. Therefore, with this strategic location, we are poised to anchor ourselves in the forefront of product delivery excellence where we can cater to the most demanding of situation.

Under the guidance and leadership of its appointed management team, the company gained certification on the prestigious **ISO9001** Quality Management System since 2014 which is a testament of its commitment towards its expanding clientele, further to its ongoing efforts to be a major supplier to the ever demanding construction industry, the company has successfully acquired the **MS144, MS145 & MS146** Product Certification License from **SIRIM** since 2015 and through these efforts that we are now gaining widespread recognition as well as exposure to the market; that we are committed to be a reliable manufacturer of quality Steel Welded Fabrics and its related wire products.

In tandem with our ongoing commitment towards Product & Services Excellence, as we continue in our pursuits of further recognition in the ever-changing certification requirements in order for us to remain as the most reliable manufacturer of quality Steel Fabrics and its related wire products; therefore, other than **SIRIM**, we are **IKRAM** Listed as well as **CIDB** Registered manufacturer and also a member of various industry associations in Malaysia.

The company has projected itself to the forefront of manufacturing excellence through the incorporation of modern production equipment through our own innovative processes coupled together with a very strong support team that **Progress Welded Mesh Sdn. Bhd.** is ever committed to be the leader; leading in its field of expertise in product innovation and development, product specialization as well as a solution provider to Developers Designers, Engineers and Contractors in the selection and also the utilization of our steel wire products through our experienced technical team's strong support and services in the field of Concrete Reinforcement and beyond.

With all these, you can be rest assured that...

through **PROGRESS**...

You will **PROGRESS**...

as we **PROGRESS** towards our mutual success and prosperity.



**Product Specifications**

Our Steel Welded Fabrics (SWF) are certified and licensed by SIRIM to MS144, MS145 and MS146 respectively as well as we are ISO9001

certified too. Apart from that, our SWF's are also approved by CIDB and IKRAM listed.

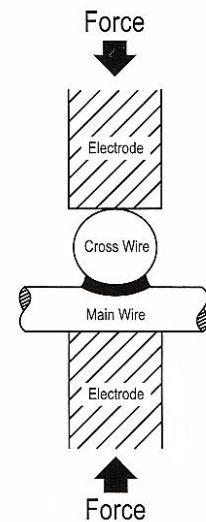
Reference Standard from **MS EN 10080:2014** which provided the basis for the development of the below standards used.

1	<b>MS144:2014</b>	Steel Wire for the Reinforcement of Concrete Products (Fourth Revision)
2	<b>MS145:2014</b>	Steel Fabric for the Reinforcement of Concrete - Specification (Fourth Revision)
3	<b>MS146:2014</b>	Steel for the Reinforcement of Concrete - Weldable Reinforcing Steel - Bar, Coil & Decoiled product - Specification (Fourth Revision)

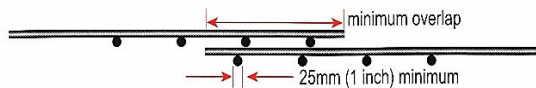
Standard for Steel Welded Fabric for the Reinforcement of Concrete : <b>MS145</b>						
Standards' Revision Year		2006		2014		
Steel Wire used must comply to...		MS144		MS146		
Ductility Grade		485	500	500A	500B	500C
Yield Strength	N/mm <sup>2</sup>	485	500	500		
		maximum 650				
Tensile Strength		510	525	515	530	565
Ratio (TS:YS)	>5.0mm	1.05		1.03	1.06	1.13
Elongation (Ag%)		12	10	Not Applicable		
Total Elongation (Agt%)	<8.0mm	Not Applicable		0.8	4.0	6.0
	>8.0mm			2.0		

**Anchorage, Welds, Laps & Bend**

Our SWF are manufactured by means of a welding process known as Resistance Welding through a controlled combination of pressure, electric current and time to develop a fusion of wires without reducing nor altering the steel properties of the wires at every welded intersection of the SWF and thus developing a specific shear resistance as in this case, 250N/mm<sup>2</sup> where the shear force shall not be less than  $0.25 \times R_e \times A_n$  as describe in MS145:2014 – Clause 7.2.4

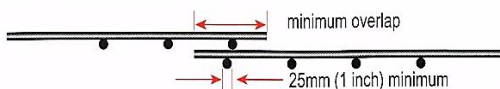


**Full Yield Strength Lap**



In accordance to EC2, Table 8.4 under Clause 8.7.5.2

**Half Yield Strength Lap**



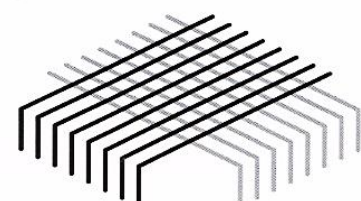
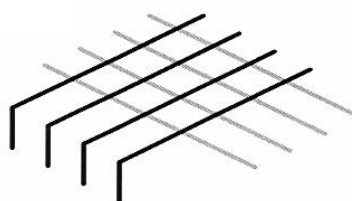
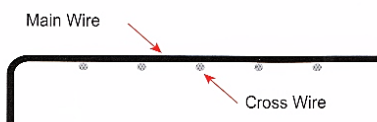
Once our SWF's is embedded in concrete, the anchorage of the fabric necessary to develop tensile stresses within the wire is achieved by the embedment of the cross wire. Since one welded intersection provides half of the yield strength needed, hence the bond between the wire surface and the concrete can be regarded as additional anchorage and the tensile stresses can be developed in shorter lengths than those required by smooth bars. Therefore, an embedment of two (2) welded intersections will develop the Full Yield Strength (500N/mm<sup>2</sup>) of the wire itself.

There are two (2) distinctive lap methods to be employed as follows: -

Tension Laps	Compression Laps
Tension Lap length should be at least equal to the design tension anchorage length necessary to develop the required stress in the reinforcement.	The length should be at least 25% more than the compression anchorage length. In the detailing of steel fabric, two (2) cross welds are provided to transfer the stresses. In side laps of a one-way slab, yield strength laps with overlap of only one cross weld are acceptable. This is commonly used in Top (Negative) Reinforcement.

\*Full Yield Strength Lap should always be provided when Lap Length is not specified.

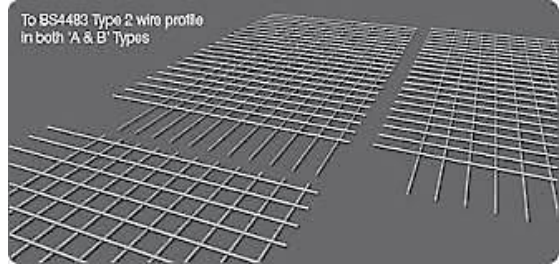
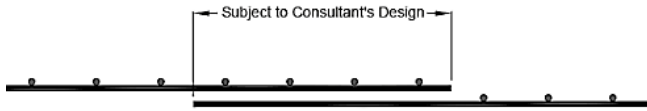
END Anchorage in the form of hooks and bends should only be used to meet specific design requirements.







Another form of innovative lapping know as Flying End Laps may also be employed to overcome excess steel coverage as a result of mesh splicing at various joints which inhibits concrete penetration.



**Distinguishing the Grades**

Since CIDB began enforcing the need for PPS Certification, we saw a significant shift towards greater product transparency in product specification. First and foremost; it is our product marking as required under MS146:2014 – Annex C where all our SWF's bear this mark of compliance hence the mark of Our Quality.

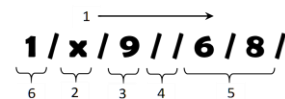
PWMSB Bar Marking Identification for wires < 10mm



**KEY**

- 1 Direction of Reading
- 2 Start
- 3 Country of Origin = 9
- 4 Works Number as per-PPS Certification = 68
- 5 Local Materials = 1 , Imported Materials = 2

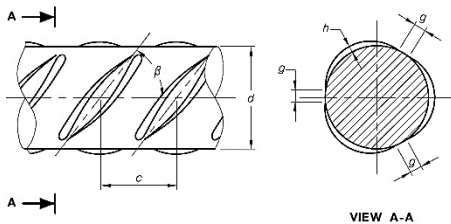
PWMSB Bar Marking Identification for wires > 10mm



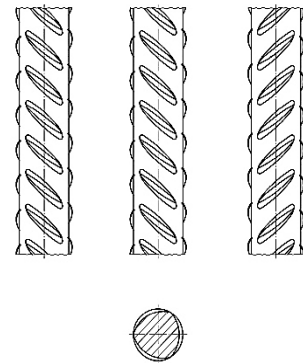
**KEY**

- 1 Direction of Reading
- 2 Start = X
- 3 Country of Origin = 9
- 4 Separation between Country of Origin Number and Works Number
- 5 Works Number as per-PPS Certification = 68
- 6 Local Materials = 1 , Imported Materials = 2

Apart from looking for our bar marks as proof of quality, another significant visual verification of the different ductility grade can also be made since we are capable in manufacturing both 500A and 500B class of SWF.

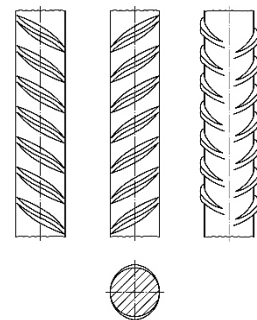
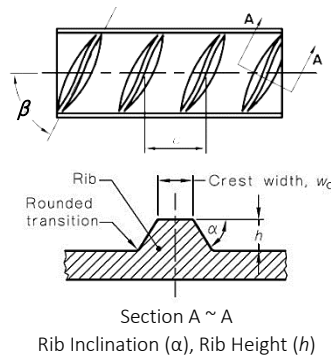


All 500A wires are produced in our plant and undergoes a very detailed and stringent Quality Control process develop based on MS146:2014 requirements. Our Rib geometry is checked in accordance to Clause 7.5.2



Example of identification of steel grade 500A (3 rows of ribs)

We only used materials sourced from reputable steel mills that fulfils the requirements of MS146:2014 – 500B specifications in the manufacture of ductility Class-B SWFs. This way, you can be rest assured that all our SWFs are supplied to you are of the highest quality possible at the most competitive rates together with our renown impeccable after sales services.



Example of identification of steel grade 500B (2 rows of ribs)

**Rust**

As defined in MS146:2014 – Clause 7.2.2 which states that rust shall not be the cause for rejection (subjected to conditions). Meanwhile, BS8110-1:1997(2005) – Clause 7.4 Surface Condition states: -

*"Reinforcement should not be surrounded by concrete unless it is free from mud, oil, paint, retarders, loose rust, loose mill scale, snow, ice, grease or any substance which can be shown to affect adversely the steel or concrete chemically, or reduce bond. Normal handling prior to embedment in the concrete is usually sufficient for removal of loose rust and scale from reinforcement."*



**Standards in Comparison**

With the gradual move from BS8110 towards Eurocode1992, the industry is also moving forward through the adoption of EN10080 as a basis to standardize the product’s specifications and the following table serves as a cross reference guideline with two (2) major standard in this region.

Product Reference Standard Specifications referred...		Malaysia	Singapore
1	Steel Fabric for the Reinforcement of Concrete – Specification (Fourth revision)	MS145:2014	SS561:2010
2	Steel for the Reinforcement of Concrete – Weldable reinforcing steel – Bar, coil and decoiled product – Specification (Fourth revision)	MS146:2014	SS560:2016

Other standards to note is the British Standards where a greater part of our SWF development was centred around BS4482, BS4483, BS4449 and BS8666 just to name a few where they are also undergoing revamps as well as revisions to bring them up to date with the EN evolution in standardization. Other notable standards is the Australian Standards under ASNZ4671 which in relation, referring to an earlier reference of the current EN10080 and we can now see a much clearer unified reference standard being established.

**Design Consideration Factors**

There are several selection methods for SWFs but the simplest way is by calculating the required steel area and then select the nearest value but never lesser than required by your calculated steel area. The most common is to select from our SWF table list of **\*MaxSTANDARD<sup>®</sup>** product.

Example 1:

Area of steel required in a particular slab design:

Main direction	751mm <sup>2</sup> /m
Cross (Secondary) direction	185mm <sup>2</sup> /m

Referring to MaxSTANDARD table:

<b>RB10</b> Main direction	785mm <sup>2</sup> /m
Cross direction	252mm <sup>2</sup> /m

Example 2:

Area of steel required in a particular slab design:

Main direction	328mm <sup>2</sup> /m
Cross (Secondary) direction	328mm <sup>2</sup> /m

Referring to MaxSTANDARD table:

<b>RE8</b> Main direction	335mm <sup>2</sup> /m
Cross direction	335mm <sup>2</sup> /m

\*All our **MaxSTANDARD<sup>®</sup>** panels comes standard at 6.0m x 2.4m to provide MAXIMUM area of coverage.

With our **MaxSTANDARD<sup>®</sup>**, it can provide the necessary steel area coverage for most reinforcement application needs and the list does not stop there as can be shown in the following tables where the SWF selection list is wide and comprehensive to address to your site’s requirements as it can be supplied as **Cut to Sized** panels to optimize your cost.

MaxSTANDARD <sup>™</sup> (PWM Reference)	MS145:2014 (SS561:2010)	Wire Diameter (mm)		Wire Spacing (mm)		Cross-Sectional Area (mm <sup>2</sup> /m)		Mass (kgs/m <sup>2</sup> )
		Main	Cross	Main	Cross	Main	Cross	
RA13	A664	13	13	200	200	664	664	10.42
RA12	A565	12	12			565	565	8.88
RA11	A475	11	11			475	475	7.46
RA10	A393	10	10			393	393	6.17
RA9	A318	9	9			318	318	4.99
RA8	A252	8	8			252	252	3.95
RA7	A193	7	7			193	193	3.02
RA6	A142	6	6			142	142	2.22
RA5	A98	5	5			98	98	1.54
RA4	A63	4	4			63	63	0.99



MaxSTANDARD™ (PWM Reference)	MS145:2014 (SS561:2010)	Wire Diameter (mm)		Wire Spacing (mm)		Cross-Sectional Area (mm²/m)		Mass (kgs/m²)
		Main	Cross	Main	Cross	Main	Cross	
RB13	B1328	13	10	100	200	1328	565	13.50
RB13/8	MS145:2006 (SS32:1999)	13	8			1328	252	12.39
RB12	B1131	12	8			1131	252	10.85
RB11	B950	11	8			950	252	9.43
RB10	B785	10	8			785	252	8.14
RB9	B636	9	8			636	252	6.97
RB8	B503	8	8			503	252	5.92
RB7	B385	7	7			385	193	4.53
RB6	B283	6	7			283	193	3.73
RB5	B196	5	7			196	193	3.05

RDA13	D1328	13	13	100	100	1328	1328	20.84
RDA12	D1131	12	12			1131	1131	17.76
RDA11	D950	11	11			950	950	14.92
RDA10	D785	10	10			785	785	12.33
RDA9	D636	9	9			636	636	9.98
RDA8	D503	8	8			503	503	7.89
RDA7	D385	7	7			385	385	6.04
RDA6	D283	6	6			283	283	4.44
RDA5	D196	5	5			196	196	3.08
RDA4	D126	4	4			126	126	1.97

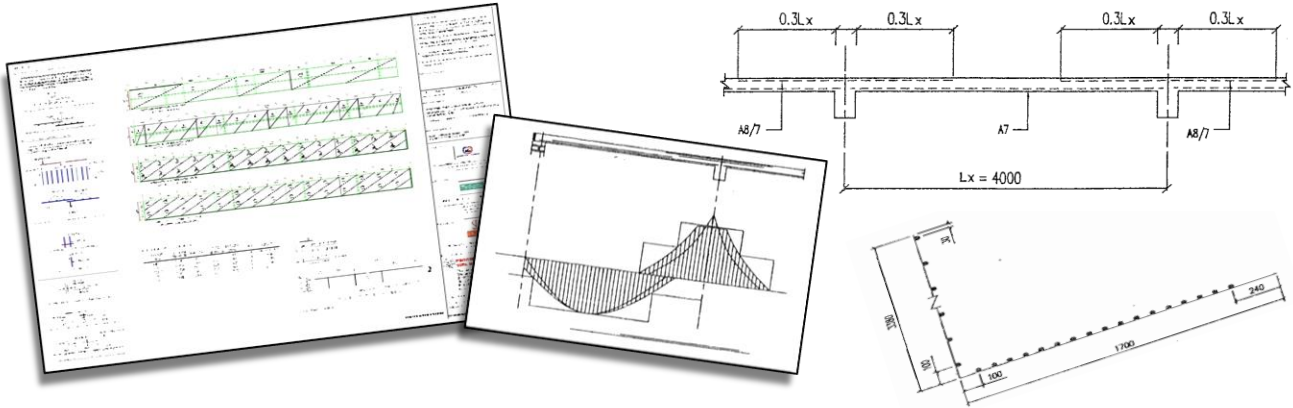
RE13	E885	13	13	150	150	885	885	13.89
RE12	E754	12	12			754	754	11.84
RE11	E634	11	11			634	634	9.95
RE10	E524	10	10			524	524	8.22
RE9	E424	9	9			424	424	6.66
RE8	E335	8	8			335	335	5.26
RE7	E257	7	7			257	257	4.03
RE6	E188	6	6			188	188	2.96
RE5	E131	5	5			131	131	2.06
RE4	E84	4	4			84	84	1.32
RE8A	E335	8	8	150	200	335	252	4.60

Should the selection of our **MaxSTANDARD**™ still cannot provide the solution, then allow us to assist in your engineering selection through our *Technical Sales & Marketing* team to study and propose to you our other innovative solution from our other range of innovative products such as our **MaxROLL**™, **MaxPANEL**™, **MaxDESIGN**™ and our **MaxCHAIR**™ to allow us to work with you on your projects.



**Other Design Consideration...**

With our team of dedicated Technical Sales & Marketing personnels, we have at our disposal various solutions to propose other forms of innovative product design to suit your most demanding application needs.



**Production Process Overview**

The flow chart provides us an overview of our business process; for us as an **MS ISO9001:2015** certified company, we do take pride in ourselves to be capable enough to continuously exhibit our prudent, effective, decisive and efficient management of our products and services; which we are marching towards the forefront of...

**Product Excellence...!**



Wirerods



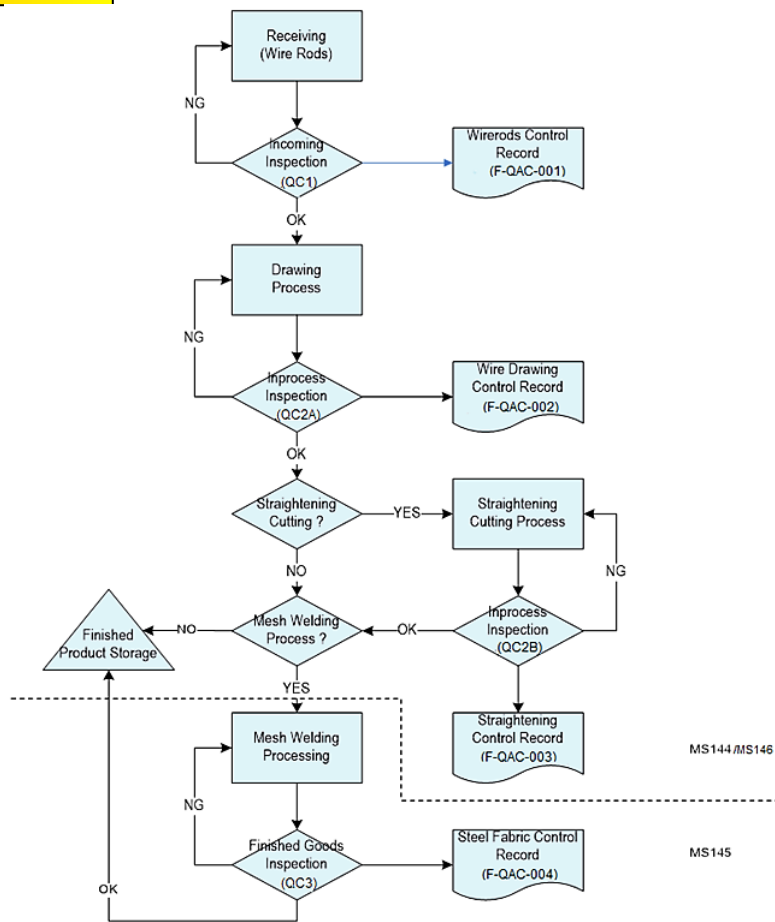
Drawn Wires



Straightened & Cut Wires



Steel Welded Fabric (SWF)







With **PROGRESS WELDED MESH** as your Reinforcement Solutions Partner... you can be rest assured that our innovative solutions will bring about a mixture of all our available products to be applied in the most economical as well as advantageous ways to **MAXIMIZE** your job site's overall management with Effective Cost Control, better Efficiency and increases our mutual benefits...

**A Kaleidoscope of Products & Processes...**







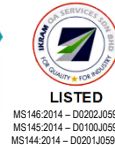
**Our Certifications...**

The collage features six certification documents:

- SIRIM QAS CERTIFICATE:** ISO 9001:2015 Quality Management Systems for the manufacture of welded steel fabric.
- IQNet CERTIFICATE:** ISO 9001:2015 for the manufacture of welded steel fabric.
- CIBB PERAKUAN PEMATUHAN STANDARD (BAHAN BINAAN):** Standard for Cold Worked Ribbed Weldable Reinforcing Steel.
- SIRIM QAS LESEN PENSIJILAN BARANGAN (Product Certification Licence):** MS 144:2014 for Cold Worked Steel Wire for Reinforcement of Concrete.
- SIRIM QAS LESEN PENSIJILAN BARANGAN (Product Certification Licence):** MS 145:2014 for Steel Fabric for the Reinforcement of Concrete.
- SIRIM QAS LESEN PENSIJILAN BARANGAN (Product Certification Licence):** MS 146:2014 for Cold Worked Ribbed Weldable Reinforcing Steel.

**REMINDER:**

Please do check back with us regularly for new updates on the latest copies of our product's certifications and licences as well as for industry updates and other achievements or accolades.







**Project References**

List of projects supplied by us...



**Malaysia**

- 1) **Central Region** (Kuala Lumpur, Selangor)
  - a. GAMUDA LAND (Kemuning) SDN. BHD. – Quayside Mall @Kota Kemuning.
  - b. PARAMOUNT PROPERTIES DEVELOPMENT SDN. BHD.
    - i. 18 Storeys Apartment @KDU Shah Alam.
    - ii. 2 Blocks 35 Storeys SalangorKu @Kota Kemuning.
  - c. ASPIRE CAUSEWAY SDN. BHD. – 4 Blocks 33 Storeys EXIM-NIDOZ @Desa Petaling.
  - d. BA SHENG SDN. BHD. – 2 Blocks 23 Storey Awana Seputeh Apartments.
  - e. MEDIA RAYA SDN. BHD. – 2 Blocks 41 Storeys Asia Café SOHO @Subang.
  - f. TAMAN EQUINE SDN. BHD. – 20 Storeys Apartment @Taman Equine.
  - g. MAYLAND SUPREME SDN. BHD. – 2 Blocks 41 Storeys Apartment @Kuala Lumpur.
- 2) **Southern Region** (Johor, Melaka, Negeri Sembilan)
  - a. BALI RESIDENCE SDN. BHD. – 40 Storeys Service Apartment @Melaka Raya, Melaka.
  - b. COUNTRY GARDEN – 2 Blocks 40 Storeys Apartment @Central Park, Tampoi, Johor.
  - c. COUNTRY GARDEN – 3 Blocks 33~35 Storeys Apartment @Forrest City, Johor.
  - d. ASTAKA – 2 Blocks 70 Storeys Condominium @Johor Bahru, Johor.
  - e. COUNTRY GARDEN – 22 Blocks 15~45 Storeys Apartment @Danga Bay, Johor.
  - f. JOHOR LAND – 1.5km Monsoon Drain 17m Wide @Bandar Dato' Onn, Johor.
  - g. PAMIR DEVELOPMENT – 69 Units 3~4 Storeys Shop lots @Taman Cahaya Kota Puteri.
  - h. MUTIARA RINI DEVELOPMENT – 240 Units Double Storey Terrace House @Johor.
  - i. SCIENTEX DEVELOPMENT – 135 Units Double Storey Terrace House @Pulai, Johor.
  - j. LIDO WATERFRONT BOULEVARD SDN. BHD. – 300m Main Drain @Johor Bahru, Johor.
  - k. GAMUDA LAND – 125 Units Double Storey Terrace House @Horizon Hills, Johor.
  - l. SUNWAY ISKANDAR SDN. BHD. – 112 Units Double Storey Terrace House @Iskandar, Johor.



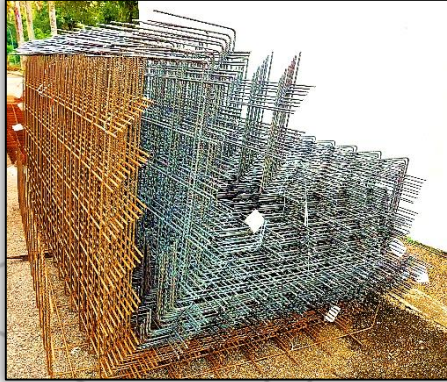
**Singapore**

- 1) UNITED PLUS STEEL RESOURCES PTE. LTD.
  - a. UNITED TEC – NTUC Warehouse Distribution Hub @Sunview
  - b. CKR GROUP OF COMPANIES – 8 Storeys Mixed Development @Geylang
- 2) ANDECO PTE. LTD. – EXXON MOBIL Jurong Island Dormitory
- 3) TONG LEE HUAT – Penjuru Container Yard



# MaxDESIGN™

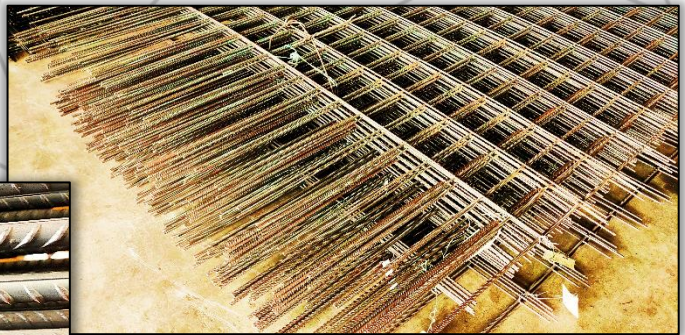
## An Innovative Purposed-Made Fabric Mesh Reinforcement System



The introduction of **MaxDESIGN™** - Progress Purposed-Made Fabric mesh was developed in tandem as a result of the changes in the Malaysian Standard of \*MS145:2014 & MS146:2014 respectively and to address the short-comings of the Regular Steel Welded Fabric (Mesh) products.

With state-of-the-art welding processes which utilizes advance numerical computer controls; it has enabled us to produce exceptionally strong welding quality and

reliability; which allowed us the capability to weld both ductility Class A & Class B bars/wires in the production of **MaxDESIGN™** mesh.



Thus, the birth of a flexible & cost-effective Purposed Made Fabric mesh reinforcement solution in what we called... **MaxDESIGN™** – Progress Purposed-Made Fabric (PMF)

The most distinctive advantage in using our PMFs or as we call it **MaxDESIGN™** are...

1. Reduced Site Logistics
2. Reduced Equipment Utilization
3. Reduced Material Consumption
4. Shorten Construction Time
5. Enhanced Workflow



Ultimately, it will provide overall... *COST Reduction & Increased Savings*

\*Our 500A bars/wires are produced in-house and are certified by SIRIM to MS146:2014 whilst 500B bars/wires are sourced from reputable Steel Mills which are certified to MS146:2014.

*MS145:2014 & MS146:2014 and SS560:2010 & SS561:2010 is based on ISO10080:2005 standards as reference and are identical.*



CERTIFIED TO ISO 9001:2015  
CERT NO.: MY-QMS 03131



CERTIFIED TO ISO 9001:2015  
CERT NO.: QMS 03131

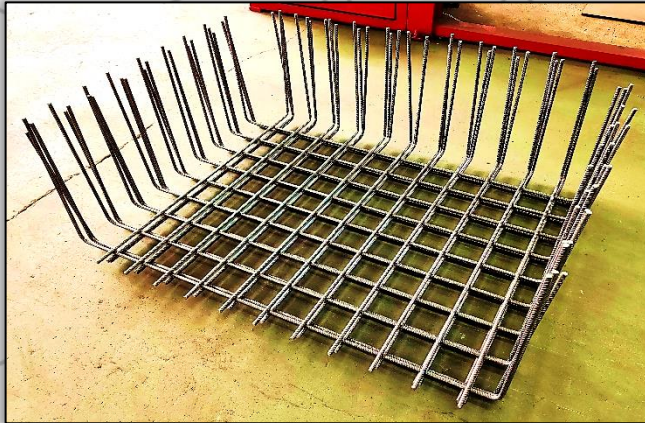


CERTIFIED TO ISO 9001:2015  
CERT NO.: QMS 03131





Why **MaxDESIGN™**...? Because it is a Purposed Made Fabric engineered to optimize and to realize the engineer’s intended design; so long as we are able to manufacture it, we will propose it. Therefore, with such proposal we work towards reducing a significant amount of unnecessary wastages due to other limitations as compared to conventional mesh.



**MaxDESIGN™** is a prudently well-managed, highly productive and cost-effective reinforcement system to date.

So, with **MaxDESIGN®™**, we can...

1. Maximize Accuracy
2. Maximize Productivity
3. Maximize Savings
4. Maximize Output
5. Maximize Profits

Since there are countless laying solutions as well as having non-restrictive application ways; so, it is available to us a host of specific customization possibilities at our disposal with the ideas to overcome certain site limitations as well as design constrains. Therefore, we have at our command, a team of highly dedicated Technical personnels that are able to work out specific proposals on your construction needs.



For more information & enquiries, please do not hesitate to contact us or our distribution partner listed below:

Distribution Partner:

Another Quality Product, proudly made & manufactured by:  
**PROGRESS WELDED MESH SDN. BHD.** 1015640-A  
 106, Jalan Cyber 5, Senai Industrial Estate III,  
 81400 Senai, Johor, Malaysia.  
 Email: [enquiry@progressweldedmesh.my](mailto:enquiry@progressweldedmesh.my)  
 Tel: +607 599 1800 Fax: +607 599 3366

Available in Singapore through:  
**PWM STEEL PTE. LTD.** UEN/GST: 202307977K  
 2, Venture Drive, Vision Exchange, Singapore 608526  
 Email: [enquiry@pwmsteel.sg](mailto:enquiry@pwmsteel.sg)  
 Tel: +65 8384 4984





# MaxPANEL™

## A Flexible & Cost-Effective Single Direction Engineered Mesh Reinforcement System



The introduction of **MaxPANEL™** - Progress Bar Mat was developed in tandem with **MaxROLL™** as a result of the changes in the Malaysian Standard of \*MS145:2014 & MS146:2014 respectively and to address the short-comings of the Regular Steel Welded Fabric products.

With state-of-the-art welding processes which utilizes advance numerical computer controls; it has enabled us to produce exceptionally strong welding quality and reliability; which allowed us the capability to weld both ductility Class A & Class B bars/wires in the production of **MaxPANEL™**.

Thus, the birth of a flexible & cost-effective Single Direction Engineered Mesh Reinforcement solution in what we called... **MaxPANEL™** - Progress Bar Mat (PBM)

The most distinctive advantage in using our PBMs or as we call it **MaxPANEL™** are...

1. Reduced Site Logistics
2. Reduced Equipment Utilization
3. Reduced Material Consumption
4. Shorten Construction Time
5. Enhanced Workflow

\*Our 500A bars/wires are produced in-house and are certified by SIRIM to MS146:2014 whilst 500B bars/wires are sourced from reputable Steel Mills which are certified to MS146:2014 too.

*MS145:2014 & MS146:2014 and SS560:2010 & SS561:2010 is based on ISO10080:2005 standards as reference and are identical.*



Ultimately, it will provide overall...  
***COST Reduction & Increased Savings***



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CERT NO.: MY-QMS 03131

CERTIFIED TO ISO 9001:2015  
CERT NO.: QMS 03131

CERTIFIED TO ISO 9001:2015  
CERT NO.: QMS 03131





Why **MaxPANEL™**...? Because it is a unidirectional reinforcement system whereby the bars/wires are welded onto a carrier bar in a pre-set pitch which can be easily placed to form reinforcement layers by combining two **MaxPANEL™** at perpendicular direction to form a crossway for slabs on site. As such, it can reduce a significant amount of materials due to minimum lapping & labour needed to lay as compared to conventional mesh.

With this crossway laying technique, job site can be more productive when compared to current conventional bar/mesh laying and tying method. **MaxPANEL™** is a very productive and cost-effective reinforcement system.

So, with **MaxPANEL™**, we can...

1. Maximize Accuracy
2. Maximize Productivity
3. Maximize Savings
4. Maximize Output
5. Maximize Profits



Therefore, it is available to us a host of specific customization possibilities at our disposal with the ideas to overcome certain site limitations as well as design constrains. Therefore, we have at our command, a team of highly dedicated Technical personnels that are able to work out specific proposals on your construction needs.

For more information & enquiries, please do not hesitate to contact us or our distribution partner listed below:

Distribution Partner:

Another Quality Product, proudly made & manufactured by:

**PROGRESS WELDED MESH SDN. BHD.** 1015640-A

106, Jalan Cyber 5, Senai Industrial Estate III,  
81400 Senai, Johor, Malaysia.

Email: [enquiry@progressweldedmesh.my](mailto:enquiry@progressweldedmesh.my)

Tel: +607 599 1800 Fax: +607 599 3366

Available in Singapore through:

**PWM STEEL PTE. LTD.** UEN/GST: 202307977K

2, Venture Drive, Vision Exchange, Singapore 608526

Email: [enquiry@pwmsteel.sg](mailto:enquiry@pwmsteel.sg)

Tel: +65 8384 4984





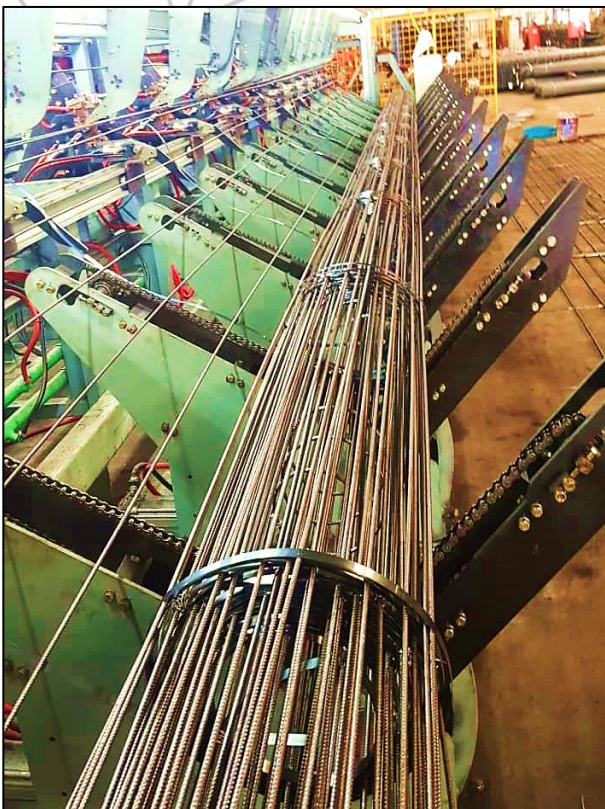
# MaxROLL™

## An Intuitive Carpet Reinforcement System

The introduction of **MaxROLL™** - Progress Rolled Mat was in line with the development of the Malaysian Standard of \*MS146:2014 which evidently equivalent to SS560:2010 and in our constant pursuits of providing innovative solutions to the construction industry that we have acquired a new & modern machine to manufacture this intuitive product.

With state-of-the-art welding processes which utilizes advance numerical computer controls; it enables us to produce exceptionally strong welding quality and reliability.

Thus, the birth of an intuitive Carpet Reinforcement solution in what we called... **MaxROLL™** - Progress Rolled Mat (PRM) where it is highly suited for placement of LARGE/WIDE floor slab area like factories, warehouses, containers yard, carparks, airports, wharfs & others with similar large/wide area usage.



The most distinctive advantage in using our PRMs or as we call it **MaxROLL™** are...

1. Reduced Site Logistics
2. Reduced Equipment Utilization
3. Reduced Material Consumption
4. Shorten Construction Time
5. Enhanced Workflow

Ultimately, it will provide overall...  
***COST Reduction & Increased Savings***

\*Our 500A bars/wires are produced in-house and are certified by SIRIM to MS146:2014 whilst 500B bars/wires are sourced from reputable Steel Mills which are certified to MS146:2014.

*MS146:2014 and SS560:2010 is based on ISO10080:2005 standards as reference and are identical.*



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CERT NO.: QMS 03131



MS ISO / IEC 17021:2011  
QS 10212:1998 GB 91





Why **MaxROLL™**...? because it is a unidirectional reinforcement system whereby the bars/wires are welded onto steel strips in a pre-set pitch and rolled up like a carpet which can be easily unrolled to form reinforcement layers for slabs on site. As such, it can reduce more than 50% of manpower needed.



With this rolling technique, most job sites can be up to 10x times more productive when compared to current conventional bar/mesh laying and tying method. **MaxROLL™** is an extremely high productivity and cost-effective reinforcement system.



So, with **MaxROLL™**, we can...

1. Maximize Accuracy
2. Maximize Productivity
3. Maximize Savings
4. Maximize Output
5. Maximize Profits

As there are countless laying solutions as well as having non-restrictive application ways; therefore, it is available to us a host of specific customization

possibilities at our disposal with the ideas to overcome certain site limitations as well as design constrains. Therefore, we have at our command, a team of highly dedicated Technical personnels that are able to work out specific proposals on your construction needs.

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