

**Test Report No. 7191119356-MEC15-TYW(221407487)**  
**dated 25 SEP 2015**



PSB Singapore

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**SUBJECT:**

Testing of Steel Conduit Fittings

**TESTED FOR:**

Nonferrous Metalcast Sdn Bhd  
Lot PT 3963 Batu Karang  
31900 Kampar, Perak  
P.O. Box 5, 31907 Kampar, Perak  
Malaysia

Attn: Mr. Ling Kah Swee

**SAMPLES DESCRIPTION:**

The following samples, aluminium alloy conduit fitting and accessories were submitted by Nonferrous Metalcast Sdn. Bhd. on 28 July 2015. for analysis.

S/No.	Sample Description	Ø20mm	Ø25mm
1	1-way Through Box	16 pcs	16 pcs
2	2-ways Through Box	16 pcs	16 pcs
3	2-ways Angle Box	16 pcs	16 pcs
4	3-ways Tee Box	16 pcs	16 pcs
5	4-ways Cross Box	16 pcs	16 pcs
6	Dome Cover	5 pcs	5 pcs
7	Inspection Bend	5 pcs	5 pcs
8	Inspection Elbow	5 pcs	5 pcs
9	Inspection Tee	5 pcs	5 pcs
10	Flexible Tube Adapter	5 pcs	5 pcs
11	Locknut	5 pcs	5 pcs
12	Screw Reducer	5 pcs (Ø20mm x Ø25mm)	
13	Extension Ring	5 pcs (Ø20mm / Ø25mm)	

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**TEST METHOD:**

IEC 61386-1 : 2008 - Conduit systems for cable management - Part 1: General requirements (Class 4)

**TEST CONDUCTED AS ACCORDANCE TO IEC 61386-1:**

1. Marking and Documentation
2. Construction
3. Dimensions
4. Impact Test
5. Bonding Test
6. IP 30 Test

**EMBOSSSED MARKINGS:**

NMC®

**TEST RESULTS:**

**1. Marking and Documentation**

Sample Description	Ø20mm	Ø25mm	IEC 61386-1:2008 Requirements ( Class 4 )
1-way Through Box	Pass		Clause 7 The marking shall durable and clearly legible.
2-ways Through Box			
2-ways Angle Box			
3-ways Tee Box			
4-ways Cross Box			
Dome Cover			
Inspection Bend			
Inspection Elbow			
Inspection Tee			
Flexible Tube Adapter			
Locknut			
Screw Reducer (Ø20mm x Ø25mm)			
Extension Ring (Ø20mm / Ø25mm)			

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**TEST RESULTS : (CONTINUE)**

**2. Construction**

Sample Description	Ø20mm	Ø25mm	IEC 61386-1:2008 Requirements ( Class 4 )
1-way Through Box	Pass		<p>Clause 9 Shall have no sharp edges, burrs or surface projections which are likely to damage insulated conductors or cables, or injury on the installer or user.</p>
2-ways Through Box			
2-ways Angle Box			
3-ways Tee Box			
4-ways Cross Box			
Dome Cover			
Inspection Bend			
Inspection Elbow			
Inspection Tee			
Flexible Tube Adapter			
Locknut			
Screw Reducer (Ø20mm x Ø25mm)			
Extension Ring (Ø20mm / Ø25mm)			

**3. Dimension**

Sample Description	Ø20mm	Ø25mm	IEC 61386-1:2008 Requirements ( Class 4 )
1-way Through Box	Pass		<p>Clause 8 Shall comply with IEC 60423</p>
2-ways Through Box			
2-ways Angle Box			
3-ways Tee Box			
4-ways Cross Box			
Dome Cover			
Inspection Bend			
Inspection Elbow			
Inspection Tee			
Flexible Tube Adapter			
Locknut			
Screw Reducer (Ø20mm x Ø25mm)			
Extension Ring (Ø20mm / Ø25mm)			

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**TEST RESULTS : (CONTINUE)**

**4. Impact**

Sample Description	Ø20mm	Ø25mm	IEC 61386-1:2008 Requirements ( Class 4 )
1-way Through Box	Pass		Clause 10.3 Shall be no sign of disintegration nor shall there be any crack visible to normal or corrected vision without magnification
2-ways Through Box			
2-ways Angle Box			
3-ways Tee Box			
4-ways Cross Box			
Dome Cover			
Inspection Bend			
Inspection Elbow			
Inspection Tee			
Flexible Tube Adapter			
Locknut			
Screw Reducer (Ø20mm x Ø25mm)			
Extension Ring (Ø20mm / Ø25mm)			

**5. Bonding Test**

Sample Description	Ø20mm	Ø25mm	IEC 61386-1:2008 Requirements ( Class 4 )
1-way Through Box	Pass		Clause 11.2 The resistance shall not exceed 0.1Ω
2-ways Through Box			
2-ways Angle Box			
3-ways Tee Box			
4-ways Cross Box			
Dome Cover			
Inspection Bend			
Inspection Elbow			
Inspection Tee			
Flexible Tube Adapter			
Locknut			
Screw Reducer (Ø20mm x Ø25mm)			
Extension Ring (Ø20mm / Ø25mm)			

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**TEST RESULTS : (CONTINUE)**

**6. Degree of Protection - Ingress of Foreign Solid Objects**

Sample Description	Ø20mm	Ø25mm	IEC 61386-1:2008 Requirements ( Class 4 )
1-way Through Box	Pass		Clause 14.1 Minimum requirements of IP 30
2-ways Through Box			
2-ways Angle Box			
3-ways Tee Box			
4-ways Cross Box			
Dome Cover			
Inspection Bend			
Inspection Elbow			
Inspection Tee			
Flexible Tube Adapter			
Locknut			
Screw Reducer (Ø20mm x Ø25mm)			
Extension Ring (Ø20mm / Ø25mm)			

  
Ting Yeow Wah  
Higher Associate Engineer

  
Dr Hu Guang Xia  
Senior Consultant  
Polymer Products  
Mechanical Centre

**PHOTOGRAPH OF THE SAMPLES SUBMITTED:**



**1-way Box Ø20mm**



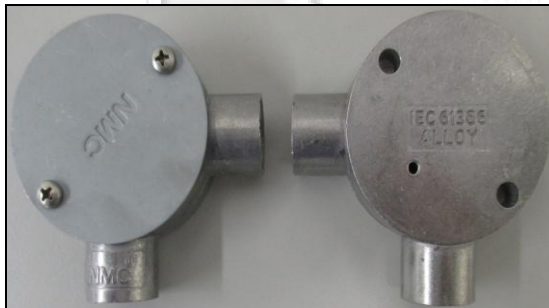
**1-way Box Ø25mm**



**2-way Box Ø20mm**



**2-way Box Ø25mm**



**2-way Angle Box Ø20mm**



**2-way Angle Box Ø25mm**



**3-way Tee Box Ø20mm**



**3-way Tee Box Ø25mm**

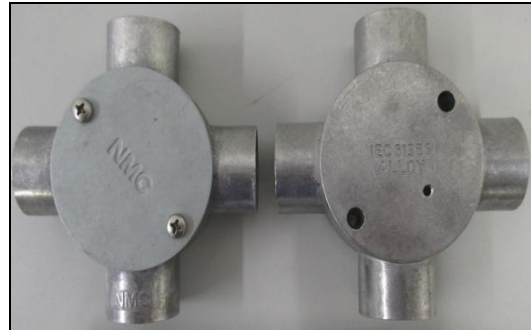
*Walt Hu Guenzler*



**PHOTOGRAPH OF THE SAMPLES SUBMITTED : CONTONUE**



**4-ways Cross Box Ø20mm**



**4-ways Cross Box Ø25mm**



**Dome Cover Ø20mm**



**Dome Cover Ø25mm**



**Inspection Bend Ø20mm**



**Inspection Bend Ø25mm**



**Inspection Elbow Ø20mm**



**Inspection Elbow Ø25mm**

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**PHOTOGRAPH OF THE SAMPLES SUBMITTED : (CONTINUE)**



**Inspection Tee Ø20mm**



**Inspection Tee Ø25mm**



**Flexible Tube Adaptor Ø20mm**



**Flexible Tube Adaptor Ø25mm**



**Locknut Ø20mm**

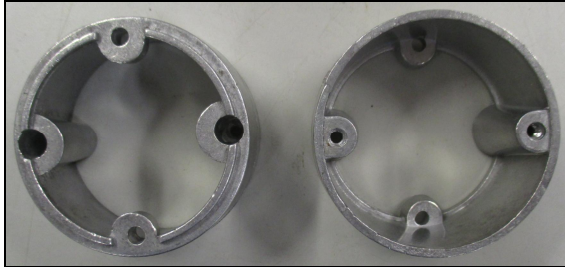


**Locknut Ø25mm**

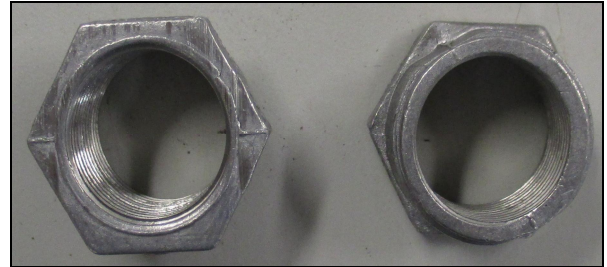
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**PHOTOGRAPH OF THE SAMPLES SUBMITTED : (CONTINUE)**



**Extension Ring(Ø20mm / Ø25mm)**



**Screw Reducer (Ø20mm x Ø25mm)**



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July 2011

