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PRODUCTS SPECIFICATION

TYPE: HAND CRIMPING TOOL

PART NO. NH 32

ISSUED : September 27, 1997
REVISED: June 13, 2003

NICHIFU TERMINAL INDUSTRIES CO.,LTD.

PRODUCT QUALITY DEPT			
APPROVED	CHECKED	CHECKED	PREPARED
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1. SCOPE This products specification is specified NICHIFU hand crimping tool(hereafter as to tool) which is intended for crimp of insulated terminals & sleeves(hereafter as to terminals).

2. TYPE, PART NO. & APPLICABLE TERMINALS Given in Table 1

Table 1

TYPE	PART NO.	APPLICABLE TERMINALS	
		TYPE	NOMINAL SIZE
HAND CRIMP TOOL (For insulated terminals & sleeves	NH 32	Insulated terminals & sleeves	0.3, 0.5, 1.25, 2.0
		Quick-disconnects	0.9, 2.0
		Bullets & receptacles	0.5, 1.25, 2.0

3. DETAILS Given in Table 2

Table 2

LENGTH	WEIGHT	Nominal size of dies	HANDLE COVER COLOR	REMARKS
280 mm	550g	0.3/0.5	RED／BLUE	w/ratchet mechanism
		1.25		
		2.0		

4. MATERIAL The materials shall be as follows.

(1) The dies shall be made of Class SCM440 specified in JIS G 4105 or at least the equivalent in mechanical properties.

(2) The other principal metallic parts shall be specified in JIS G 3311 and JIS G 4501.

5. CONSTRUCTION The construction shall be as follows.

(1) The tool shall be free from detrimental flaws, cracks, rust and other defects at any part.

(2) Color of handle cover is Red/Blue.

(3) The tool ensure no excessive clearance, smooth operation and favourable handing conditions.

(4) The tooth part of die shall be especially be finished smooth by buffing. There is no flaws, cracks, etc. on the terminals when crimped.

(5) Tool shall have a crimp confirming mechanism. A ratchet mechanism confirms that the dies are not opened and the terminal can not be removed from the tool until the distance between both dies reaches to the distance which can perform proper crimp-style connection.

(6) The tooth part of a tool shall be so stamped that the crimp mark given in Table 3 in correlation with the nominal size of terminal applicable to the tooth part, is indicated on the crimped part of terminal.

Table 3

Nominal size of applicable terminal	Crimp mark
0.3/0.5	0
1.25	1
2.0	2

6. SHAPE AND DIMENSION Tool shape and dimension is per our drawing.

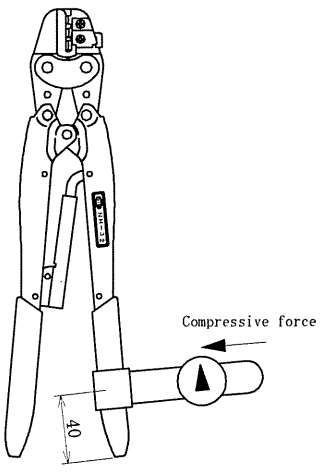
7. PERFORMANCE AND TEST

7.1 TEST CONDITION Unless otherwise specified, the tests shall be carried out in a room at ordinary temperature 20℃±15℃ and ordinary humidity 65℃±20℃ as specified in JIS Z 8703.

Table 4

<table>
<tr><th>TEST</th><th>PERFORMANCE</th><th>METHOD</th></tr>
<tr><td>7.2 Appearance</td><td>It shall satisfy 5. (1)</td><td>Visual inspection.</td></tr>
<tr><td>7.3 Construction</td><td>It shall satisfy 5. (2)～(6)</td><td>·No excessive clearance is examined by vernier calipers (JIS B 7507), thickness gauge (JIS B 7524), etc.
·Finish of the tooth part of a tool and the crimp mark are examined by crimped terminal.
·The other items are examined by crimp operation.</td></tr>
<tr><td>7.4 Dimension</td><td>It shall satisfy 6.</td><td>Measured by vernier calipers (JIS B 7507) or metal rules (JIS B 7516).</td></tr>
<tr><td>7.5 Hardness of dies</td><td>The hardness of dies shall be not less than Rockwell hardness HRC40～45.</td><td>Carry out this test on the side face of die near the crimping face in accordance with JIS Z 2245.</td></tr>
<tr><td>7.6 Maximum load at handle</td><td>The maximum load applied to the handle shall be in 270～340 N.

Table 5
<table><tr><th>Terminal type</th><th>Terminal size mm²</th><th>Wire type</th><th>Wire size mm²</th></tr><tr><td>TMEV 2</td><td>2.0</td><td>IV</td><td>2.0</td></tr></table></td><td>As illustrated in Fig. 1, mount a load indicator to a position of handles 40mm apart from its end, combine the terminal of the maximum size applicable to the tool and wire of the maximum size which is applicable to the said terminal and which occupies the maximum space factor, carry out the crimp style connection, and measure the maximum load applied to the handle during the period until the connecting work is completed due to operation of the crimp confirming mechanism.

Fig. 1
  </td></tr>
</table>

<table>
<tr><th>TEST</th><th>PERFORMANCE</th><th>METHOD</th></tr>
<tr><td>7.7 Endurance</td><td>The specimen shall not cause wearing detrimental to practical service at any part and shall satisfy the ratio of the maximum load at the handle after completion of endurance test to that before the test shall be not less than the relevant value 70%.

Table 6
<table><tr><th>Number of continuous test cycles</th><th>Load</th><th>Test duration of one cycle s</th></tr><tr><td>30,000</td><td>80～100% of maximum load applied todies</td><td>Within 10</td></tr></table></td><td>As illustrated in Fig.2, mount the tool on the testing device, and test it continuously under the test conditions specified in Table 6. Carry out the test for load at handle of 7.6 before and after this test.

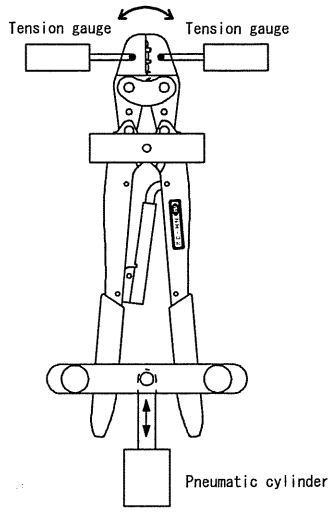
Fig. 2
 
</td></tr>
<tr><td>7.8 Crimp height</td><td>Given in Table 7.

Table 7
<table><tr><th>Dies ID</th><th>Crimp height mm</th></tr><tr><td>0.3/0.5</td><td>1.65～1.80</td></tr><tr><td>1.25</td><td>2.35～2.50</td></tr><tr><td>2.0</td><td>2.50～2.65</td></tr></table></td><td>Measure the crimp height as specified by Table 7 using the external micrometer specified in JIS C 7502, limit gauges, etc.</td></tr>
<tr><td>7.9 Performance of connection</td><td>It shall satisfy our products specification.</td><td>The test methods for crimped terminals are in our products specification for terminals.</td></tr>
</table>

8. MARKING The following items shall be marked.

8.1 Marking on product

(1) Brand name, (NTM ニチフ) , (2) Part no. (label) ,

(3) Nominal size of applicable terminals, (0.3/0.5, 1.25, 2.0) , (4) Lot no.,

8.2 Package In addition to 8.1.

(1) Trade name

9. Package Blister package, and a shipment box shall be cardboard package.

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