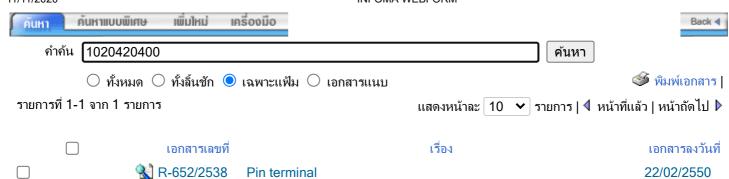
11/11/2020 INFOMA WEBFORM ™



- 1 -

Invitation to Bid No.:

Specification No.: R-652/2538

C Material, equipment, and specifications for CONNECTORS AND ELECTRICAL

CONTACT COMPOUND

C1 General material and packing instructions

Additional to the general instructions, the following shall be observed:

1a Scope

These specifications cover mechanical, compression and wedge type connectors to

connect conductors, and electrical contact compound.

1b Standard

The connectors shall be manufactured and tested in accordance with the latest IEEE,

ANSI, EEI-NEMA, ASTM, VDE Regulations and DIN, or equivalent; unless otherwise

specified in these specifications.

The bodies of connectors shall be of aluminium-alloy according to manufacturer's

standards, unless otherwise specified in these specifications.

1c Principal requirement

1c.1 General

The connectors shall be suitable for connecting stranded and/or solid conductors

according to DIN, TIS, or equivalent; unless otherwise specified in these specifications.

1c.2 **Bolted type connector**

For the purpose of against self loosening, each bolt shall be furnished with at least of one

(1) locknut. The bolts shall be designed for single-wrench installation. Each U-bolt

is counted as two (2) bolts. The bolts shall be tightened to torque levels according to

these shown in the table below or according to manufacturer's recommendation; the

technical details of tightening torque levels shall be submitted on request.

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II

All ferrous materials shall be hot-dip galvanized after manufacturing; except bolts, lockwashers, washers, and nuts up to M6 shall be electro galvanized; according to the relevant standards or having the thickness or zinc coating shown in the table below.

| Sizes of Bolts, Lockwashers, | Tightening Torque Level of | Minimum Thickness | |
|------------------------------|----------------------------|-------------------|--|
| Washers, and Nuts | Galvanized Steel Bolts | of Zinc Coating | |
| | kgf-m | mm. | |
| M 6 (1/4") | - | 0.010 | |
| M 8 (5/16") | 2.0 | 0.040 | |
| M 10 (3/8") | 2.7 | 0.040 | |
| M 12 (1/2") | 5.5 | 0.040 | |
| M 14 (9/16") | 6.5 | 0.040 | |
| M 16 (5/8") | 7.5 | 0.040 | |
| M 20 (3/4") | 11.0 | 0.045 | |

1c.3 Compression type connector

Full tension sleeves and partial tension sleeves shall withstand at least 90% and 40%, respectively, of the minimum breaking strength of the conductors for which they are designed. Each sleeve shall be prefilled with electrical contact compound and closed both ends by plastic caps.

Conductor barrel of each terminal lug shall be prefilled with electrical contact compound and closed by a plastic cap.

Tap connectors shall be prefilled with electrical contact compound and packed in suitable packages, one (1) or two (2) pieces per package.

1c.4 Compression deadend assembly set

The aluminium body and aluminium jumper terminal shall accommodate aluminium conductor which is according to TIS; and the conductor barrel shall be prefilled with electrical contact compound and closed by a plastic cap.

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- 3 -

Wedge type connector 1c.5

The wedge type connector shall consists of C-shaped member and wedge, and made of

aluminium alloys which shall be described.

The wedge type connector shall pass the current cycle tests Class A (500 cycles) in

accordance with the latest EEI-TDJ-162/NEMA C3, ANSI C 119.4 or equivalent.

Bidders who have never submitted the test reports of current cycle tests shall submit

either prior to receipt of bids or within fifteen (15) days of the bid closing date, for

saving bid consideration time, the Item without submitting the report shall be rejected.

1c.6 Marking

Each connector shall be marked, on the body, at least as follows:

(1) Applicable conductor type and size.

(2) Manufacturer's symbol.

(3) Marks to press, for compression type only.

(4) Words "FULL TENSION" and "PARTIAL TENSION", on full tension sleeves and

partial tension sleeves, respectively.

Except for compression type tap connectors for main line size less than 10 mm² (not

including size 10 mm²), if the applicable conductor type and size can not be marked on

the bodies, the marks shall be marked on individual packages.

1c.7 Sample

Free samples shall be supplied on request. The samples will not be returned.

1d **Packing**

Each item shall be packed separately in suitable packages in sets or pieces of 1, 2, 100,

200, 250, or 300.

Packages of same item may be packed together in suitable cases.

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C2 Material and packing data to be given by bidder

2a For each item offered, the following details shall be submitted with the bid:

Catalogue number.

Specifications of materials used for the component parts (body, bolts, nuts, screws,

lockwashers, washers, etc.).

Surface finishing of the component parts.

Nominal cross-sectional area in mm² of conductor for which the connector is designed.

Diameter in mm of conductor for which the connector is designed.

Material of conductors for which the connector can be used (Al, ACSR, Cu, etc.).

Recommended tightening torques for bolts in kgf-m.

Weight in kg/100 sets or pieces.

2b It shall be advised whether the connectors should be protected by armour tape or preformed line guards, etc.

2c For each item offered, a drawing with dimensions in mm and marking details shall be submitted with the bid. For compression type connector, a drawing with the dimensions including inside and outside diameters and marking details shall be submitted.

2d Number of aluminium-alloy copper-alloy, and/or the chemical compositions of the bodies of connectors.

2e Packing details

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Packing method.

Number of sets or pieces in each package (maximum 300 sets or pieces in one package)

Principal dimensions of each package in cm.

Volume of each package in m³.

Gross weight of each package in kg.

Net weight of each package in kg.

Number of packages.

If several packages are contained in one big case, further details are required:

Number of packages in each case.

Principal dimensions of each case in cm.

Volume of each case in m^3 .

Gross weight of each case in kg.

Number of cases.

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Table
Packing Details for Connectors

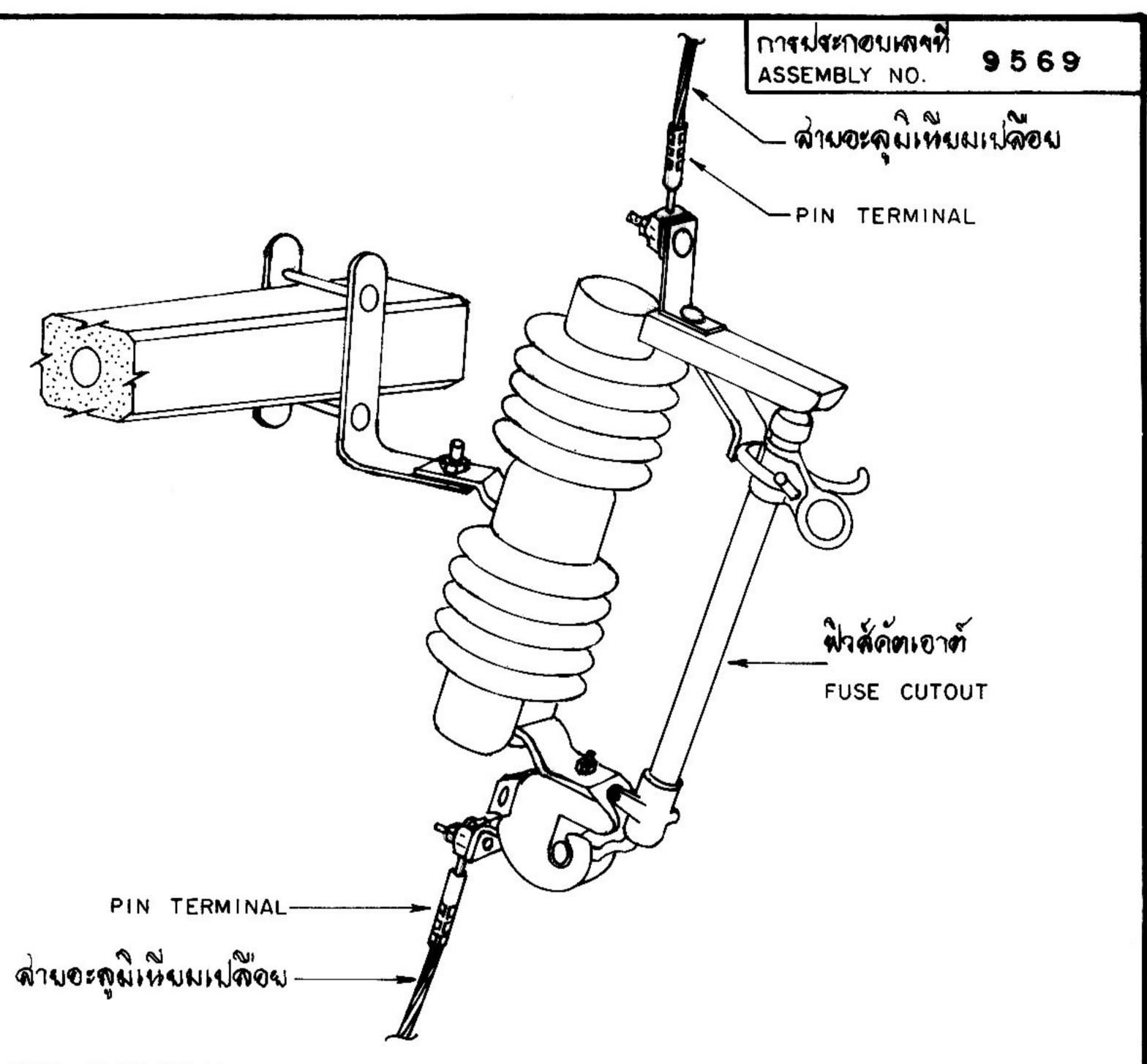
| PEA Material No. | Quantity Per Package | Packing Method |
|------------------------------|----------------------|----------------|
| 02300101, 02300102, 02310000 | 250 | Sack |
| 02300103 | 75 | Sack |
| 02310001 | 200 | Sack |
| 02310002 | 100 | Sack |
| - | 1,000 | Sack |

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Specification No.: R-652/2538

C3 Schedule of detailed requirement

| | C3 Schedule of detailed requirement | | | | | |
|------|-------------------------------------|----------|--|--|--|--|
| | PEA | | | | | |
| Item | Material | Quantity | Description | | | |
| | No. | | | | | |
| 1 | - | pcs | Pin terminal, made of aluminium sleeve bonded to copper stud, for | | | |
| | | | making termination of aluminium conductor according to TIS 85- | | | |
| | | | 2522 : size 50 mm ² (dia. 9.06 mm) to copper alloy terminal clamp | | | |
| | | | of equipment. | | | |
| | | | The copper stud shall be tin-plated, if necessary | | | |
| | | | The aluminium sleeve shall be pre-filled with electrical contact aid | | | |
| | | | compound and capped. | | | |
| | | | See figure below: | | | |
| | | | The installation tool shall be ANDERSON VC-6. | | | |
| | | | Note: | | | |
| | | | 1. Enclosed Drawing No. SA4-015/37009 | | | |
| | | | 2. The bidder has to supply three (3) pieces of pin terminal as | | | |
| | | | samples, within fifteen (15) days, counted from the Committee's | | | |
| | | | request. | | | |
| | | | The samples will not be returned. | | | |
| | | | F 1 | | | |
| | III | | | | | |



TITO PIN TERMINAL

ใช้เป็นอุปกรณ์สำหรับต่อปลายสายอะลุมิเนียม ต่อเข้าข้อของอุปกรณ์ใฟฟ้า เช่น ฟิวส์ตัดเอาตั้ง ชีวี. , ข้ามุชีซึ่งเหงต่าของหม้อแปลง แฟล , ดิสตอนเนตตึงสวิตซ์ ที่มีข้าต่อสามแบบ BOLT TYPE เพื่อส่วนแก้ปัญหาจุดเข้าสายอุปกรณ์ไฟฟ้าข้อน และอาชักขาดได้

พ้อมหะนำไหกาสมีข้าง ของหนะนำไหกาสมีข้าง

- 1. เพื่อกาสหาด PIN TERMINAL ให้เหมาะสมกับสหาดสองสามที่ใส่ต่อเล้าอุปกรณ์ใฟฟ้า
- 2. ทำความสะอาคปลายสาย และสั่วต่อสายของอุปกรณ์ไฟฟ้าตัวมแปรงระเหล็ก
- 3. สอกปลางสามเข้าปลายข้างหนึ่งของ PIN TERMINAL มีบดามเครื่องมือมีบสหิด ไฮดรอลิต
- 4. สอดปลาบด้านที่เป็นทองแดงสุบดีบุกเข้าจัจต่อสายของอุปกชณ์ไฟฟ้ากาลให้แน่นพอประมาณ

| พุ่มการ พุ่มการมา บอรรูง รบราสท พุ่มทุกทายมายรูจาบย | การไฟฟ้าส่วนภูมิกาด | ยับทมลูเนสเหกก เลเนมลูเนสเหกก |
|---|--|--|
| MOURAINE MAN BANDANAN SOLOLOR AND | Name A A A A A A A A A A A A A A A A A A A | เลี้ยนผลเลานที่ 18 ผู้ก. 37 แก้แนนสั้นที่ ผลเม่น ผาตุจาดัจน |
| นองข้องบาลตุปสาพเขา เกาเบล | พำหนับที่อดานเข้าอุปกรกับฟฟ้า use of Pin Terminal for making terminations of conductors in TERMINALS OF EQUIPMENT | แผนเลา SA4 - 015/37009 |

| | Invitation to Bid No.: | | | Manufacturer: | | | |
|-----|-------------------------------|----------------|--|----------------|--------------|--------------|--|
| | Specification No.: R-652/2538 | | | Trade-mark: | | | |
| | | | Coun | try of origin: | | | |
| | | | Bidde | r: | | | |
| | | | Bid N | · o.: | | | |
| | C4 Price s | <u>chedule</u> | Date | | | | |
| | | | | | | | |
| | PEA | | | | Unit Cost | Total Cost | |
| Ite | m Material | Catalogue | Description | Quantity | (See details | (See details | |
| | No. | No. | | | & conditions | & conditions | |
| | | | | | attached) | attached) | |
| 1 | - | | Pin terminal, for making termination of aluminium conductor size | pcs | | | |
| | | | mm ² . | | | | |
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| | III | | | | | | |