
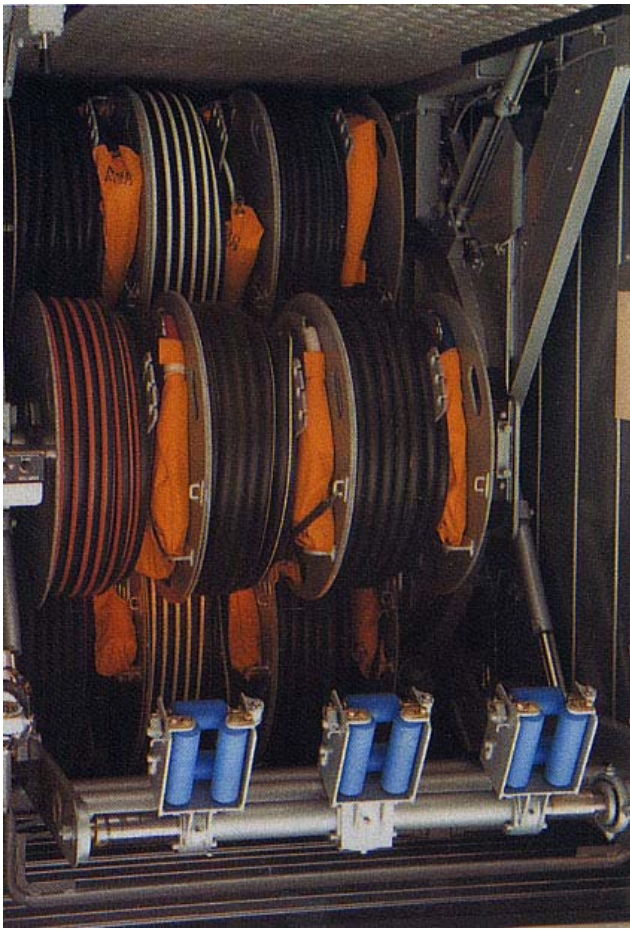
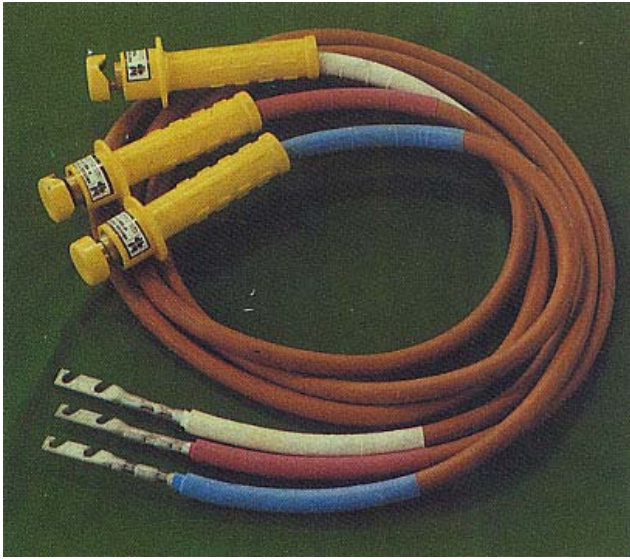



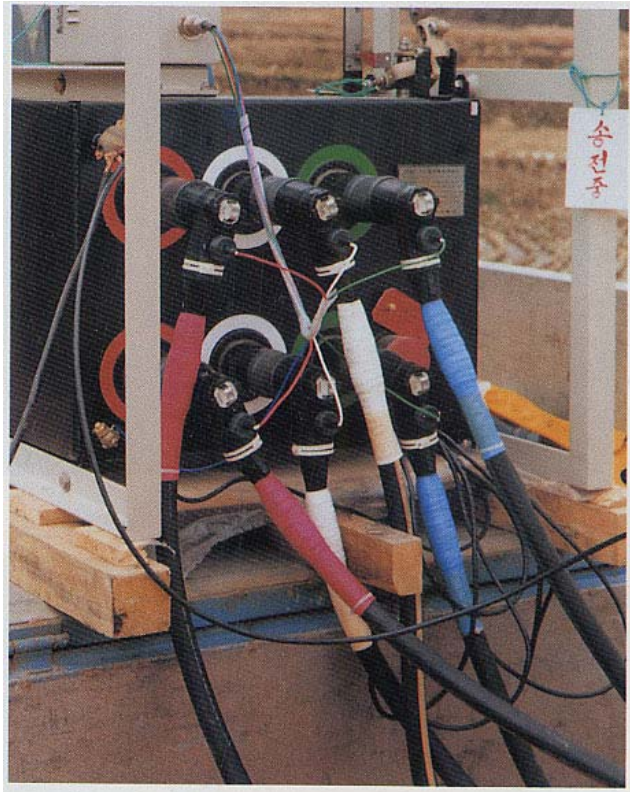



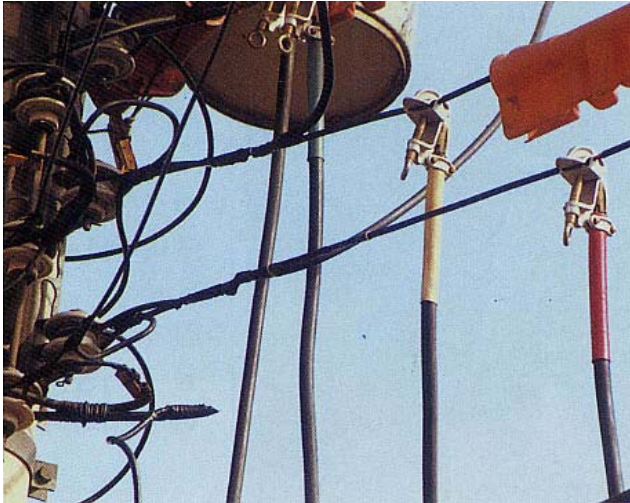
Equipment and Materials


Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>1. Middle Cable</p> <p>(Su-san)</p> <p>(Kwang-lim)</p>	 	<ul style="list-style-type: none"> ▶ 38mm², 60m 4sets, 3P Basis(Phase identification: Band per color) ▶ Middle Cable is used to connect in straight section, and both ends of cable shall have the termination or more than equal structure and function being able to connect with straight joint and termination. It is used for principal line of by-pass system ▷ One end is with termination to connect to HV consumer and branch line, and lower end is the cable having connection part being able to connect with various connector by on-ouch. ▷ It is strongly recommended to clean up and apply silicone grease in the connection surface of connection parts before connection. ▷ After using also, protection cap for dust-proof and protection bag are recommended to mount after cleaning of termination surface, silicone grease, dust and etc. ▷ Pay special attention to handle exterior metal parts since it cannot be utilized due to defomation by dropping and./or crashing. ▷ By-pass Cable is used when connection of Transformer with straight(branch) connector and is able to connect with elbow connector and straight(branch) connector.

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>2. Cable clamp for main cable connection and termination cable</p> <p>(2-1) Termination cable</p>	  	<ul style="list-style-type: none"> ► 38mm², 15m 2sets, 3P Basis(Phase identification: Band per color) ► It is composed of terminal being able to connect with inleted cable head parts and clamp being able to easily connect and disconnect with cable. ► Termination cable is used to connect overhead cable with inleted cable, and is able to connect with termination and inleted cable. ► Termination cable is used to connect termination cable with Van connection part, and is able to connect with straight joint.

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>3. Branch cable</p>	 	<ul style="list-style-type: none"> ► 38mm², 15m 2sets, 3P Basis(Phase identification: Band per color) ► It is used to connect middle cable and branch cable and pole mounted T/R, and is able to connect with termination and branch connector. ▷ One end is with termination being able to connect to HV consumer and branch cable, and lower end is the cable having connection part being able to connect with various connector by one-touch. ▷ It is strongly recommended to clean up and apply silicone greese in the connection surfaces of connection parts before connection. ▷ After using also it is recommended to clean termination surface, silicone greese, dust and etc. ▷ After cleaning, it is recommended to mount protection cap and protection bag.



Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>4. LBS connection cable</p>	 	<ul style="list-style-type: none"> ▶ 38mm², 60m 2sets, 3P Basis(Phase identification: Band per color) ▶ It is used to connect Van connection parts with LBS and composed of termination being able to connect with Van connection parts and T-type elbow connector or termination having more than equal structure and function. ▷ It is strongly recommended to clean up and apply silicone grease in the surfaces of connection parts before connection. ▷ After using also, it is recommended to clean termination surface, silicone grease, dust and etc. ▷ After cleaning, it is recommended to mount protection cap and protection bag. ▷ Pay special attention to handle connector metal parts since it can not be utilized due to deformation by dropping and/or crashing.

Equipment	Figures	► Contents
		▷ Remarks
5. LV Cable	 	<p>► More than 60mm², 20m, more than 4 sets (for grounding : more than 22mm², 20m)</p> <p>► It is the cable to easily connect to main cable by using T/R truck and to supply consumer of T/R secondary side power in case replacement of T/R</p>

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>6. Straight cable joint</p>	  	<div>► For middle cable connection 15sets</div> <div>► It is used to mutually connect By-pass cable and middle cable and has structure not to easily take off under the state of tensile force of cable installation.</div> <div>▷ Connect after identification of mutual cable colors(red, white, blue) to be connect.</div> <div>▷ It is used for straight connection of each cable and is able to connect and disconnect by one-touch.</div> <div>▷ It is strongly recommended to clean up and apply silicone greese in the surface of connection parts before connection.</div> <div>▷ After using also, it is recommended to clean up greese and dust in connection surface and to mount pretection cap in both ends.</div> <div>▷ Pay special attention to handle connector metal parts since it can not be utilized due to deformation by dropping and/or crashing.</div> <div>※ Remarks</div> <div>① Number of connection/disconnection : 2000times</div> <div>② It is recommended to ascertain if sudden change in function and connector deformation have been occurred by means of AC withstand voltage test and connecting resistance variation test in every 200times.</div>




Equipment	Figures	<div>▶ Contents</div> <div>▷ Remarks</div>
<p>(6-1) Straight joints protection box</p>	  	<ul style="list-style-type: none"> ▶ For connection of middle cable 6pcs ▶ It is used for protection from external impact when installation of straight joints on the ground. ▷ Put direct connection parts in protection box, then fix with lock metal parts. Lock the door, if necessary. ▷ It is strongly recommended to ground with grounding wire since this protection box has a terminal for ground.

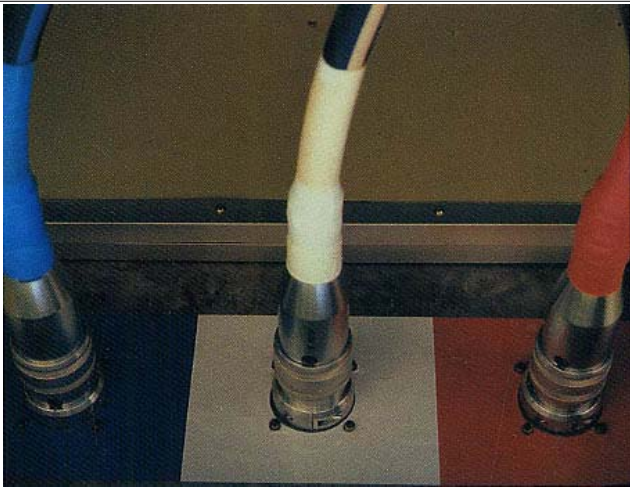
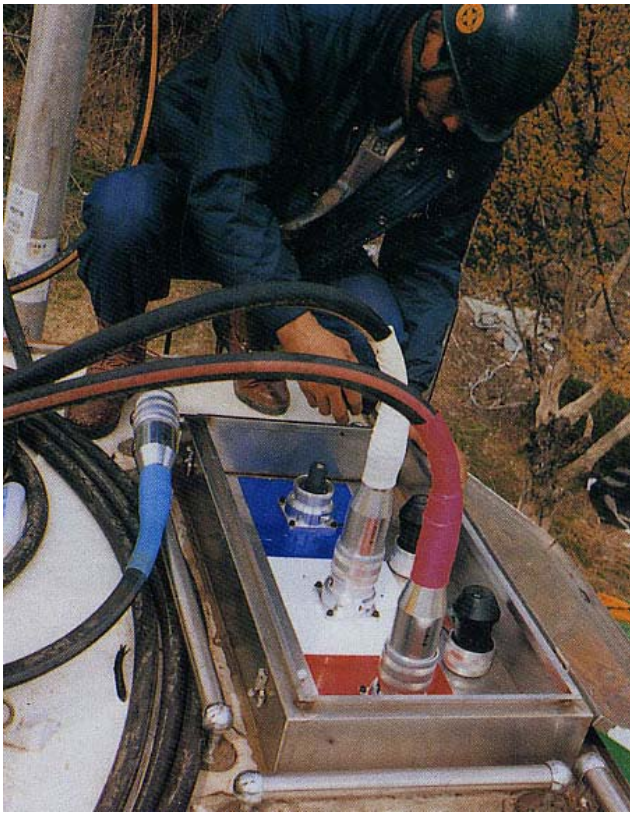
Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>(6-2) Straight joint custody box</p>		<p>► For straight joint protection(for 3phases) 6pcs</p> <p>► It is used to protect connector from external impact when connector carriage and storage.</p> <p>※ Connection Method of Connector</p> <p>1. Connection Procedure</p> <p>1) Removal of protection cap.</p> <p>2) Clean connection parts of rubber mold up and apply silicone grease.</p> <p>3) Connection of connector : Identify insertion completion mark(black band).</p> <p>4) Line position of slide metal parts for locking must be rotated about 90 degree with pin for locking to prevent locking release.</p> <p>2. Procedure of disconnection</p> <p>1) Fit the line of slide metal parts for locking with position of pin for locking, then release locking by pulling out the slide metal parts to direction of pin for locking.</p> <p>2) Disconnect the connector in the state of slide metal parts pulled out.</p> <p>3) Mount protection cap after cleansing silicone grease, etc. in the connection surface of rubber mold.</p>


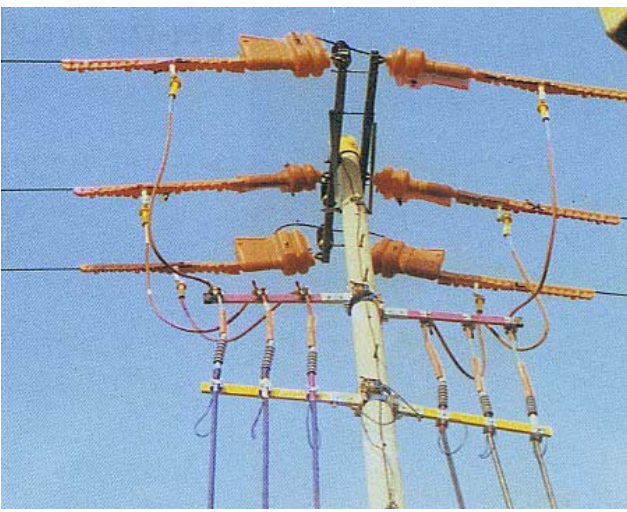
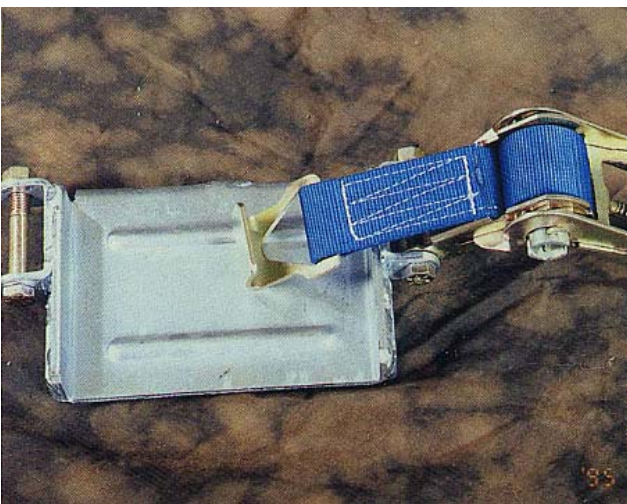
Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
(6-3) Cleansing gauze		<div>► It is used for cleansing dirt and moisture of connection parts before connection of each connection parts.</div>
(6-4) Silicone grease		<div>▷ It is strongly recommended to clean up, then apply silicone grease when connecting cable to each connectors.</div>

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>7. Branch connector</p> <p>(7-1) Adapter for branch</p>	  	<ul style="list-style-type: none"> ► T-Connector for branch cable 6ea ► Adapter for branch must be used for branch connection when distribution from principal line is required. ▷ Connect after identification of mutual cable colors (red, white, blue) to be connect. ▷ Metal part insulation cap must be inserted in place that branch connector is vacant when it is used for straight connection. ▷ It is strongly recommended to clean up connection parts with cleansing gauze, then apply silicone grease before connection. ▷ Pay special attention to handle connector metal parts since it can not be utilized due to deformation.

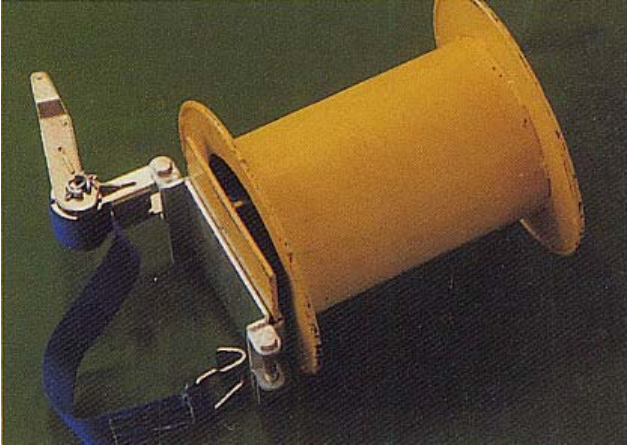

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>(7-2) Protection box for branch connection</p>	  	<ul style="list-style-type: none"> ▶ For branch cable connection (T-branch connector) 6ea ▶ It is used to protect connection part from external impact when installation of T-branch connector on the ground. ▷ Put T-branch connection part in protection box and fix it by metal parts for locking, then lock the metal parts for locking if necessary. ▷ It is strongly recommended to ground with grounding wire since this protection box has a terminal for ground. ▷ Protection box must be kept by leaning well when got wet by rain or moisture penetrated although no apprehension of erosion since it is made of stainless, aluminum and etc.


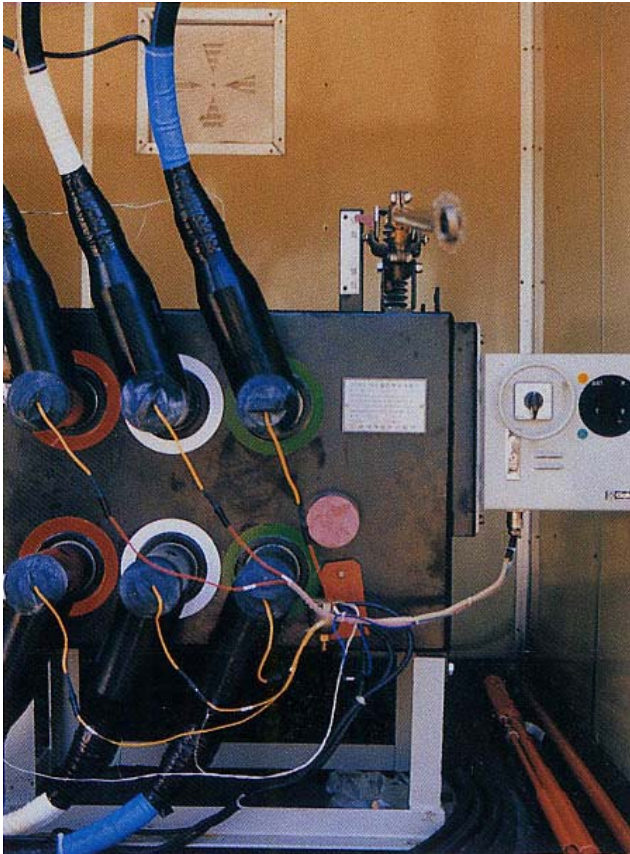
Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>(7-3)</p> <p>Protection box for Branch connectors</p>	  	<ul style="list-style-type: none"> ► For branch connectors protection(for 3phases) 3ea ► It is used for protection of connector from external impact when transportation and storage of connectors.


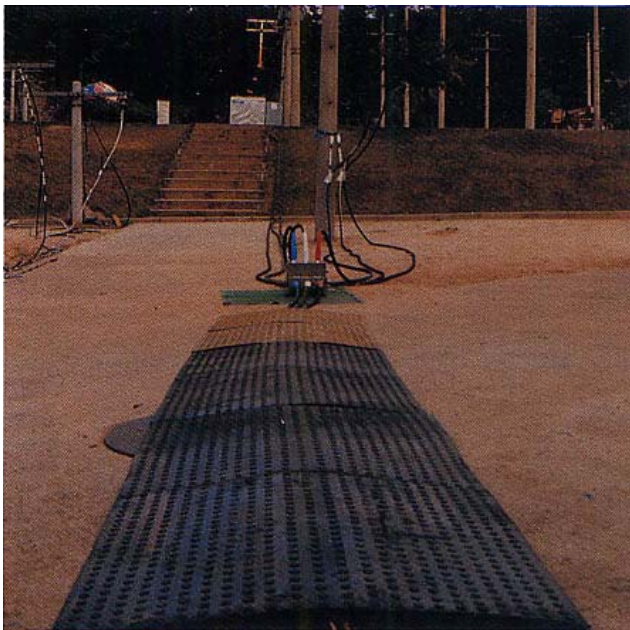

Equipment	Figures	► Contents ▷ Remarks
<p>8. Connector for Van connection part</p>	 	<ul style="list-style-type: none"> ► It shall be mounted in T/R truck (Van : upper terminal of T/R truck) : more than 38mm², 15m ► It is used to connect inlet cable and LBS connection cable, and has structure being able to firmly fix at Van. ▷ It is installed in upper part of Van of T/R truck when connection between inlet cable of temporary support pillar and LBS of T/R truck

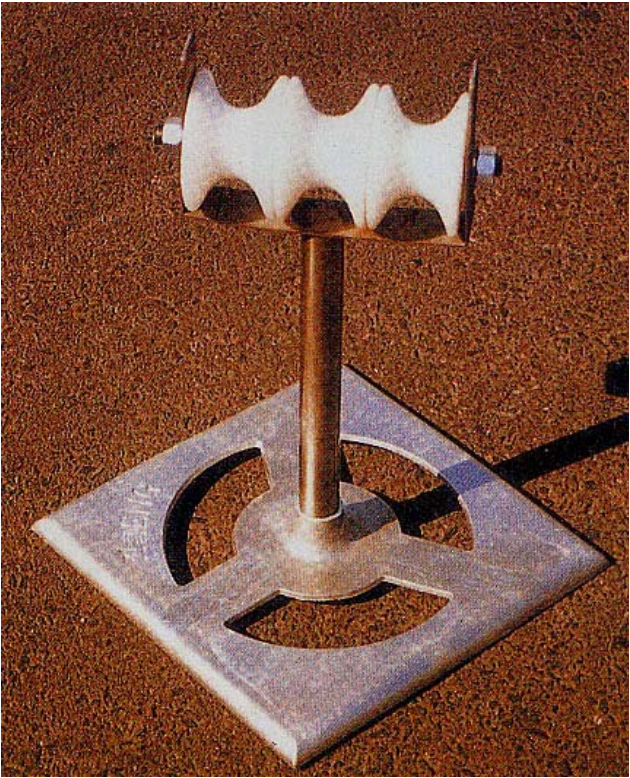
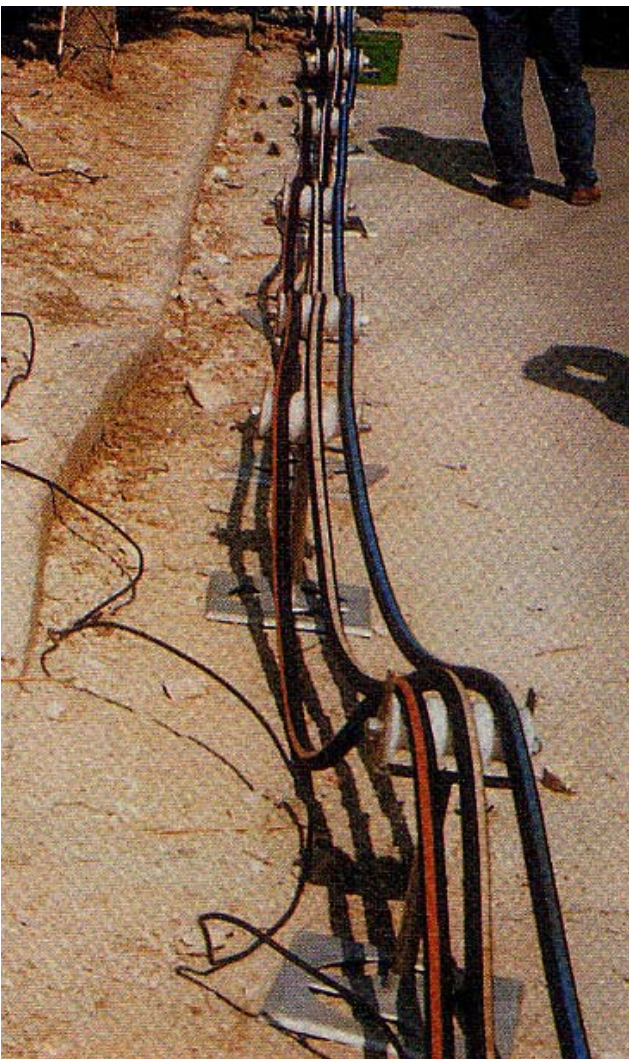
Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>9. Temporary support cleat</p> <p>(9-1) Metal parts for pole fixing</p>	  	<ul style="list-style-type: none"> ► For supporting insulation operation rod and cable inlet 3ea ► It is for supporting cable by fixing at pole when cable inlet. ▷ Cleat part can be mounted in any direction of work at will. ▷ Don't fasten the butterfly-unts in each parts of cleat. ▷ It is strongly recommended to ground with grounding wire since metal parts of temporary support cleat has connection bolt with grounding wire. ► Metal parts are able to fix temporary support cleat in pole.


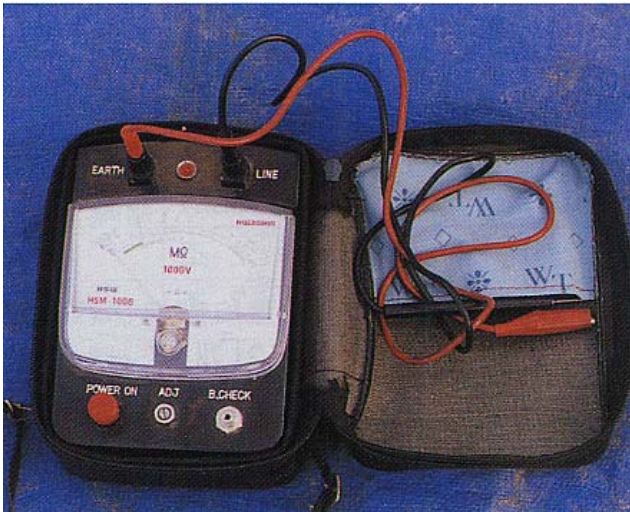
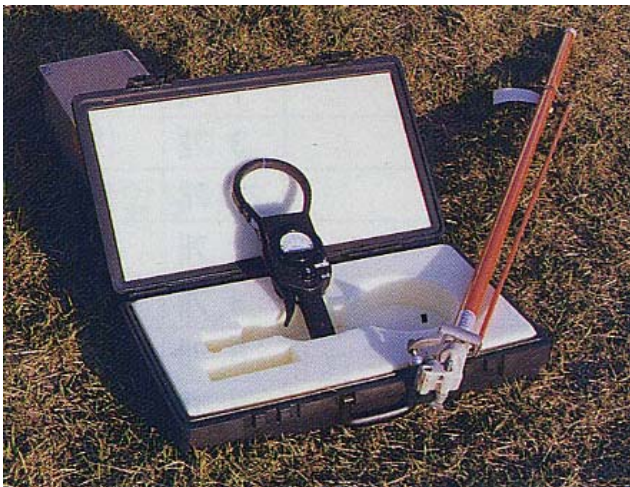
Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>(9-2) Band for fixing in pole</p>		<ul style="list-style-type: none"> ► For by-pass cable support 10ea ► It is band for fixing cable strain clamp in pole.
<p>(9-3) Cable strain clamp</p>	 	<ul style="list-style-type: none"> ► For by-pass cable support 30ea ► It is used to properly pull cable installed to pole ▷ Fasten hook of cable strain clamp at D-shaped ring of connecting band. ▷ Keep the proper room in cable installed and put cable in cable strain clamp. ▷ Fasten a wedge by beating cable strain clamp with a monkey wrench(spanner). ▷ Adjust supporting position to equalize slackness of three cables.

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>(9-4)</p> <p>Metal parts for surplus cable management</p>	 	<ul style="list-style-type: none"> ► For managing room in length of cable 3ea ► When the cable length of installed middle cable and LBS cable is surplus, it is used for managing by rolling the surplus cable in bundle and hanging it on reel. ▷ Bundle of surplus cable shall be bigger than diameter of reel.

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>10. Loadbreak switch</p>		<ul style="list-style-type: none"> ► For by-pass line switching(phase checking part) 2ea ► It is open/close equipment for incoming line to consumer of new installation and extension of HV distribution line and is used to devide line and branch off. ▷ Connection method is easily to connect and disconnect by suing elbow and plug type per each phase. ▷ Operation rod for LBS must be removed when transportation and it is not used. ▷ Switch shall be positioned in OFF to prevent discharge of phase checking machine at normal times. ▷ Pay special attention not to bring down or give impact during transportation.
<p>11. LBS mounted inside T/R truck</p>		<ul style="list-style-type: none"> ▷ Grounding is positively necessary when using.

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>12.</p> <p>Cable protector</p>	  	<ul style="list-style-type: none"> ► For protection from impact after cable installation on the ground 8ea ► It is used to protect cable from pressure and impact by passing of cars when cable be installed on the ground. ▷ Upper plate cover(yellow) and lower plate underlay(black) shall be overlapped and adhered. ▷ Lay the underlay and put the cover after putting cable down in groove, then step on with the feet to proerly lock the underlay and cover. ▷ Sands in groove of protector must be removed when putting cable into the groove.

Equipment	Figures	<div>► Contents</div> <div>▷ Remarks</div>
<p>13.</p> <p>Cable reel (Cable roller along the street)</p>	 	<p>► For by-pass cable construction 24ea</p> <p>※ Characteristic of cable roller along the street</p> <ul style="list-style-type: none"> - To protect cable from damage by installation on the ground. - Easy for removal works of cable roller along street. - No apprehension for stamping cable by passing cars.

Equipment	Figures	► Contents
		▷ Remarks
14. Cable reel car		► It is for loading on piece of cable reel and to install and rewind cable.
15. Insulation resistance tester		► It is to measure insulation resistance of cable after cable installation.
16. Load current tester		▷ It is for measuring the load of each phases of working line by HV Ammeter. ▷ It is recommended to do work after load transferring in abnormal situation by measuring load current.