

Electricity Specification 400S11

Issue 7 August 2021

Overhead Line Steelwork for Wood Pole Lines and Ancillary Steelwork for Lattice Steel Towers



Amendment Summary

ISSUE NO. DATE	DESCRIPTION
Issue 7 August 2021	Heavy duty stay plate (Drawing I-400S11-SWK-029) kitted with ancillary items. Prepared by: David Talbot Approved by: Policy Approval Panel and signed on its behalf by Steve Cox, Engineering and Technical Director

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1 Introduction

This Specification comprises general requirements for the Approval and testing of steelwork employed on the electricity distribution network owned by Electricity North West Limited (Electricity North West). Also included are technical particulars relating to the constructional requirements of all steelwork, and the markings that shall be applied to all steelwork prior to delivery. The Appendices provide detailed specification data for each item of steelwork. [Appendix A](#) is a schedule of all steelwork in alphanumeric order, followed by associated drawings (in drawing number order). [Appendix B](#) identifies the items of steelwork required for each overhead line type (e.g. [Appendix B4](#) lists all steelwork required for constructing a line to Specification ES40002).

2 Scope

This Specification covers all separate steelwork items required for the construction of overhead lines on wood poles (from LV to 132kV) and ancillary steelwork for lattice steel towers, as identified in the appropriate overhead line specification (e.g. ES40002, ES40003). It does not cover steelwork for the construction of steel towers.

3 Definitions

ABC	Aerial Bundled Conductor.
Approval	Sanction by the Electricity North West Overhead Line Circuits Manager that specified criteria have been satisfied
CCC	Compact Covered Conductor.
Contract	The agreement between Electricity North West and the Contractor for the execution of the Works including therein all documents to which reference may properly be made in order to ascertain the rights and obligations of the parties under the said agreement.
Contractor	The person or person's firm or company, including personal representatives, successors and permitted assigns, who's Tender has been accepted by Electricity North West.
ENA TS	Energy Networks Association Technical Specification.
OHL	Overhead Line.
Specification	The Specifications and schedules (if any) agreed by the parties for the purpose of the Contract.

Sub-Contractor	Any person (other than the Contractor) named in the Contract for any part of the Works or any person to whom any part of the Contract has been sub-let with the consent in writing of the Electricity North West Overhead Line Circuits Manager, and the legal representatives, successors and assigns of such person.
Supplier	Any person or person's firm or company who supplies goods to Electricity North West or to its Contractor.
Tender	An offer in writing to execute work or supply goods at a fixed price.
Tenderer	The person or person's firm or company, including personal representatives, successors and permitted assigns, invited by Electricity North West to submit a Tender.

4 General Requirements for Approvals and Testing

4.1 Product not to be Changed

No change in the product, packaging or labelling shall be made after Approval has been granted without prior notice to the Electricity North West Overhead Line Circuits Manager, and receipt of a written agreement to the proposed change from the Electricity North West Overhead Line Circuits Manager.

4.2 Electricity North West Technical Approval

The Tenderer shall submit, with this Tender, proposals for testing which will demonstrate, to the satisfaction of the Electricity North West Overhead Line Circuits Manager, compliance with this Specification. Such tests shall be carried out without expense to Electricity North West.

Alternatively, technical reports and other data may be submitted that the Tenderer considers will demonstrate, to the satisfaction of the Electricity North West Overhead Line Circuits Manager, compliance with this Specification. Acceptance of this evidence shall be at the discretion of the Electricity North West Overhead Line Circuits Manager but will not be unreasonably withheld.

Approval shall be 'factory specific' and is not transferable to another factory without the written Approval of the Electricity North West Overhead Line Circuits Manager.

The Supplier and product shall comply with all the relevant requirements of Electricity North West documents EPD311 and CP311.

4.3 Quality Assurance

The Tenderer shall confirm whether or not Approval is held in accordance with a quality assurance scheme accredited under ISO 9000. If not, the Tenderer shall submit a statement of the quality assurance procedures employed to control the quality of the product, including the performance of Suppliers and Sub-Contractors.

The right is reserved for the repeat of such tests, from time to time, that the Electricity North West Overhead Line Circuits Manager may deem to be reasonably necessary to demonstrate continued compliance with the Specification.

The Tenderer shall submit, with the Tender, a list of tests and inspections which are carried out on the product prior to despatch which shall demonstrate, to the satisfaction of the Electricity North West Overhead Line Circuits Manager, fitness for installation and service.

The Tenderer shall provide free of charge to Electricity North West such samples as may, in the opinion of the Electricity North West Overhead Line Circuits Manager, be reasonably required for inspection and/or retention as quality control samples. The Electricity North West Overhead Line Circuits Manager will confirm the requirement for samples at the time of Tendering.

The right is reserved for inspections to be made of Tenderer's facilities, from time to time, as deemed reasonably necessary by the Electricity North West Overhead Line Circuits Manager to ensure compliance with this Specification and any Contract of which it forms a part.

The Tenderer shall submit, with the Tender, such details of product packaging disposal, as will enable Electricity North West to comply with the requirements of BS EN ISO 14001 - Environmental Management Systems.

4.4 Formulation

The Tenderer shall submit, with the Tender, such details of the formulation and use of the product and associated substances as will enable Electricity North West to comply with the obligations of the Health and Safety at Work Act and the Control of Substances Hazardous to Health Regulations, in the use, storage and disposal of the product. The Tenderer may stipulate, prior to submission of such information, that it is to remain confidential, and the Electricity North West Overhead Line Circuits Manager will, if requested, confirm agreement to this prior to receipt of the information.

4.5 Identification Markings

The Tenderer shall submit, with the Tender, details of markings which it is proposed to apply to the product or packaging to identify manufacturing batches or items. The forms and content of such markings shall be subject to the Approval of the Electricity North West Overhead Line Circuits Manager and shall in all cases include the Electricity North West approved description and commodity code number.

The Tenderer shall submit, with the Tender, such details of marking gross weight on components, assemblies and packages, as will enable Electricity North West to comply with the Health and Safety Manual Handling Operation Regulations, for components, assemblies and packages supplied with a gross weight over 1kg. The forms and content of such markings shall be subject to the Approval of the Electricity North West Overhead Line Circuits Manager.

4.6 Minimum Life Expectancy

The minimum life expectancy of all products covered by this Specification is 75 years.

4.7 Product Conformity

Preference will be given to those Suppliers who can provide suitable product conformity certification to a recognised or specified standard, or an equivalent certification.

4.8 Delivery

Technical delivery conditions shall be as described in BS EN 10025.

4.9 Confirmation of Conformance

The Tenderer shall complete the conformance declaration sheets in [Appendix C](#). Failure to complete these declaration sheets may result in an unacceptable bid.

5 Requirements for Type and Routine Testing

The Electricity North West Overhead Line Circuits Manager shall set out the requirement of the following tests to be carried out by the Supplier at the Supplier's cost.

5.1 Requirement for Type Tests at Suppliers Premises

These are a series of one-off type tests, which are carried out to ensure the satisfactory performance of the product design, under extremes of operating stresses, and of endurance, as may be appropriate, to be determined by the Electricity North West Overhead Line Circuits Manager.

These may or may not be destructive tests.

5.2 Requirement for Routine Tests at the Supplier's Premises

These tests may be required to be carried out on every individual unit or component, as specified, or at some regular frequency to be determined by the Electricity North West Overhead Line Circuits Manager.

The results of these tests may be required to be supplied to Electricity North West with each unit purchased or retained for inspection, at a period to be determined by the Electricity North West Overhead Line Circuits Manager.

6 Constructional Requirements

6.1 General

Steelwork shall conform to all requirements of this Specification and ENA TS 43-95 (Steelwork For Overhead Lines). Manufacturing tolerances shall be those given in ENA TS 43-95, unless otherwise stated. Additionally, where another specification is quoted in the "(derived from)" column in Appendix A, the item shall meet the general requirements of that specification. For example, steelwork, ball ended hook, 15/32 (Dwg I-400S11-SWK-027) shall meet the requirements of BS 3288-2: 1990.

6.2 Steelwork Finish

Galvanizing shall be to BS EN ISO 1461. Galvanized steelwork shall be free from sharp edges or points left by the galvanization process.

7 Documents Referenced

All references to documents listed below are to the latest versions, unless stated otherwise.

03/08/21

DOCUMENTS REFERENCED	
Health and Safety at Work Etc Act.	
Control of Substances Hazardous to Health (COSHH) Regulations.	
Manual Handling Operations Regulation.	
BS EN ISO 9000:	Quality management systems.
BS EN ISO 14001:	Environmental Management Systems.
BS 4-1:	Structural steel sections. Specification for hot-rolled sections.
BS 1387:	Specification for screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable for welding or for screwing to BS 21 pipe threads.
BS 3288:	Insulator and conductor fittings for overhead power lines.
BS 3643:	ISO metric screw threads.
BS 4190:	ISO metric black hexagon bolts, screws and nuts.
BS EN 10025:	Hot rolled products of non-alloy structural steels. Technical delivery conditions
BS EN ISO 1461:	Hot dip galvanized coatings on fabricated iron and steel articles. Specifications and test methods.
BEBS L1:	Specification for Medium & Low Voltage Overhead Lines on Wood Poles

ENA TS 43-30:	LV Overhead lines on wood poles. (Vertical formation.)
ENA TS 43-50:	132kV Single circuit overhead lines on wood poles.
ENA TS 43-91:	Stay strands and stay fittings for overhead lines.
ENA TS 43-95:	Steelwork for overhead lines.
ENA TS 43-96:	Fasteners and washers for wood pole overhead lines.
EPD311:	Approval of Equipment.
CP311:	Equipment Approval Process.
ES400C3:	Wood Pole Overhead Line Conductors (up to and including 132kV)
ES400C29:	Connectors and Fittings for Overhead Line Conductors
ES400C30:	Overhead Line Copper-work.
ES400G1:	Specification for Cable Guards.
ES400O2:	Overhead-Lines of Compact-Covered-Construction for 6.6, 11 & 33kV.
ES400O3:	Bare-Wire Overhead-Lines on Wood Poles for 11/6.6 and 33 kV: Design and Construction.
ES400O4:	LV ABC Overhead Lines and Services.

03/08/21

8 Keywords

None applicable.

Appendix A – Schedule of all OHL Steelwork

SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork kit, cable terminal, 33kV	I-400S11-SWK-092 (Electricity North West development)	ES40002 ES40003	122848
Steelwork, angle bracket support, insulator (132kV wood pole line) (Dwg I-400S11-SWK-044)	I-400S11-SWK-044 (ENA TS 43-95: Fig. 38)	ENA TS 43-50	122800
Steelwork, ball clevis (Dwg I-400S11-SWK-013)	I-400S11-SWK-013 (BS 3288-2: 1990)	ES40002	122114
Steelwork, ball ended hook, 15/32 (Dwg I-400S11-SWK-027)	I-400S11-SWK-027 (BS 3288-2: 1990)	Steel tower TBA	122297
Steelwork, ball ended hook, 15/81 (Dwg I-400S11-SWK-087)	I-400S11-SWK-087 (BS 3288-2: 1990)	ES40002 ES40003	122298
Steelwork, ball ended eyelink, insulator, 15/30 (Dwg I-400S11-SWK-078)	I-400S11-SWK-078 (BS 3288-2: 1990)	ENA TS 43-50 Steel tower TBA	122841
Steelwork, ball ended eyelink, 28/30 (Dwg I-400S11-SWK-069)	I-400S11-SWK-069 (ENA TS 43-91: Dwg 439108, J)	ENA TS 43-50 Steel tower TBA	122827
Steelwork, ball ended eyelink, 42/30 (Dwg I-400S11-SWK-070)	I-400S11-SWK-070 (ENA TS 43-91: Dwg 439108, J)	ENA TS 43-50 Steel tower TBA	122828
Steelwork, bracket, pilot pin (Dwg I-400S11-SWK-020)	I-400S11-SWK-020 (Not applicable)	ES40003	111457
Steelwork, cable support, crossarm 'A', cable terminal (132kV wood pole line) (Dwg I-400S11-SWK-056)	I-400S11-SWK-056 (ENA TS 43-95:Fig. 50)	ENA TS 43-50	122803
Steelwork, cable support, crossarm 'B', cable terminal (132kV wood pole line) (Dwg I-400S11-SWK-057)	I-400S11-SWK-057 (ENA TS 43-95: Fig. 51)	ENA TS 43-50	122804
Steelwork, channel support, 132kV sealing ends and surge diverters (132kV wood pole line) (Dwg I-400S11-SWK-052)	I-400S11-SWK-052 (ENA TS 43-95: Fig. 46)	ENA TS 43-50	122805

SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, cranked links, 28/87 (Dwg I-400S11-SWK-089)	I-400S11-SWK-089 (BS 3288: 1990)	ENA TS 43-50	109593
Steelwork, crossarm attachment plate, downlead (132kV wood pole line) (Dwg I-400S11-SWK-049)	I-400S11-SWK-049 (ENA TS 43-95: Fig. 43)	ENA TS 43-50	122808
Steelwork, crossarm brace, diagonal (132kV wood pole line) (Dwg I-400S11-SWK-048)	I-400S11-SWK-048 (ENA TS 43-95: Fig. 42)	ENA TS 43-50	122809
Steelwork, crossarm brace, diagonal (Dwg I-400S11-SWK-024)	I-400S11-SWK-024 (ENA TS 43-95: Dwg 439515)	ES40003	133335
Steelwork, crossarm strut (tie strap) (Dwg I-400S11-SWK-005)	I-400S11-SWK-005 (ENA TS 43-95: Dwg 439526)	ES40002 ES40003	133353
Steelwork, crossarm strut, 2.0m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-040)	I-400S11-SWK-040 (ENA TS 43-95: Fig. 34)	ENA TS 43-50	122812
Steelwork, crossarm strut, 2.5m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-041)	I-400S11-SWK-041 (ENA TS 43-95: Fig. 35)	ENA TS 43-50	122813
Steelwork, crossarm support channel (132kV wood pole line) (Dwg I-400S11-SWK-039)	I-400S11-SWK-039 (ENA TS 43-95: Fig. 33)	ENA TS 43-50	122814
Steelwork, crossarm tie strap, 2.0m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-042)	I-400S11-SWK-042 (ENA TS 43-95: Fig. 36)	ENA TS 43-50	122815
Steelwork, crossarm tie strap, 2.5m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-043)	I-400S11-SWK-043 (ENA TS 43-95: Fig. 37)	ENA TS 43-50	122816
Steelwork, crossarm, 4.1m (Dwg I-400S11-SWK-035)	I-400S11-SWK-035 (ENA TS 43-95: Dwg 439521)	ES40002 ES40003	133221
Steelwork, crossarm, angle/terminal (132kV wood pole line) (Dwg I-400S11-SWK-038)	I-400S11-SWK-038 (ENA TS 43-95: Fig. 32)	ENA TS 43-50	122811

SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, crossarm, cable terminal, 2500mm centres (132kV wood pole line) (Dwg I-400S11-SWK-051)	I-400S11-SWK-051 (ENA TS 43-95: Fig. 45)	ENA TS 43-50	122810
Steelwork, crossarm, H-pole, straight line section/angle section (Dwg I-400S11-SWK-003)	I-400S11-SWK-003 (ENA TS 43-95: Dwg 439564)	ES40002	133202
Steelwork, crossarm, H-pole, terminal (Dwg I-400S11-SWK-004)	I-400S11-SWK-004 (ENA TS 43-95: Dwg 439565)	ES40002	133203
Steelwork, crossarm, intermediate, 2.0m spacing (132kV wood pole line) (Dwg I-400S11-SWK-036)	I-400S11-SWK-036 (ENA TS 43-95: Fig. 30)	ENA TS 43-50	122806
Steelwork, crossarm, intermediate, 2.5m spacing (132kV wood pole line) (Dwg I-400S11-SWK-037)	I-400S11-SWK-037 (ENA TS 43-95: Fig. 31)	ENA TS 43-50	122807
Steelwork, crossarm, jumper support (Dwg I-400S11-SWK-028)	I-400S11-SWK-028 (Electricity North West development)	ES40002 ES40003	133615
Steelwork, crossarm, single pole, intermediate/pin angle (Dwg I-400S11-SWK-021)	I-400S11-SWK-021 (ENA TS 43-95: Dwg 439519)	ES40003	133310
Steelwork, crossarm, single pole, intermediate/pin angle (light duty) (Dwg I-400S11-SWK-080)	I-400S11-SWK-080 (ENA TS 43-95)	Repair only	133338
Steelwork, crossarm, single pole, intermediate/pin angle/straight line section/angle section (Dwg I-400S11-SWK-001)	I-400S11-SWK-001 (ENA TS 43-95: Dwg 439562)	ES40002	133200
Steelwork, crossarm, single pole, section/section angle (light duty) (Dwg I-400S11-SWK-079)	I-400S11-SWK-079 (ENA TS 43-95)	Repair only	133339
Steelwork, crossarm, single pole, straight line section/angle section and H-pole angle section up to 60° (Dwg I-400S11-SWK-022)	I-400S11-SWK-022 (ENA TS 43-95: Dwg 439520)	ES40003	133329
Steelwork, crossarm, single pole, terminal (Dwg I-400S11-SWK-002)	I-400S11-SWK-002 (ENA TS 43-95: Dwg 439563)	ES40002	133201

SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, crossarm, single pole, terminal (light duty) (Dwg I-400S11-SWK-081)	I-400S11-SWK-081 (ENA TS 43-95)	Repair only	133340
Steelwork, crossarm, single pole/H-pole, terminal (Dwg I-400S11-SWK-023)	I-400S11-SWK-023 (ENA TS 43-95: Dwg 439522)	ES40003	* 133337
Steelwork, clip, circuit colour plate (Dwg I-400S11-SWK-064)	I-400S11-SWK-064 (Electricity North West development)	Any steel tower	122817
Steelwork, earth attachment nut, temporary (132kV wood pole line) (Dwg I-400S11-SWK-058)	I-400S11-SWK-058 (ENA TS 43-95: Fig. 53)	ENA TS 43-50	122818
Steelwork, fall-arrest anchor point, pole (Dwg I-400S11-SWK-026)	I-400S11-SWK-026 (Electricity North West development)	ES40002 ES40003 ENA TS 43-50	260820
Steelwork, foundation brace, H-pole (132kV wood pole line) (Dwg I-400S11-SWK-050)	I-400S11-SWK-050 (ENA TS 43-95: Fig. 44)	ENA TS 43-50	122819
Steelwork, foundation brace, H-pole (pole centres 1830mm) (Dwg I-400S11-SWK-017)	I-400S11-SWK-017 (ENA TS 43-95: Dwg 439558)	ES40002 ES40003	111325
Steelwork, foundation brace, H-pole (pole centres 2500mm) (Dwg I-400S11-SWK-034)	I-400S11-SWK-034 (ENA TS 43-95: Dwg 439559)	ES40002 ES40003	111320
Steelwork, helicopter-reference fixing kit, steel towers (Dwg I-400S11-SWK-031)	I-400S11-SWK-031 (Electricity North West development)	Any steel tower	122820
Steelwork, insulator bracket (top hat) (Dwg I-400S11-SWK-025)	I-400S11-SWK-025 (ENA TS 43-95: Dwg 439518)	ES40003	133302
Steelwork, insulator pin, 11kV (10kN) (Dwg I-400S11-SWK-006)	I-400S11-SWK-006 (BS 3288)	ES40002 ES40003	128252
Steelwork, insulator pin, 33kV (10kN) (Dwg I-400S11-SWK-007)	I-400S11-SWK-007 (BS 3288)	ES40002 ES40003	128104

SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, link, stay, 28/86 (132kV wood pole line) (Dwg I-400S11-SWK-068)	I-400S11-SWK-068 (Electricity North West development)	ENA TS 43-50	122829
Steelwork, links, long kit (Dwg I-400S11-SWK-016)	I-400S11-SWK-016 (Electricity North West development)	ES400O2 ES400O3	* 133206
Steelwork, links, short kit (Dwg I-400S11-SWK-015)	I-400S11-SWK-015 (Electricity North West development)	ES400O2 ES400O3	* 133207
Steelwork, LV D-iron (Dwg I-400S11-SWK-086)	I-400S11-SWK-086 (ENA TS 43-95)	ENA TS 43-30	111244
Steelwork, mounting plate, insulator (132kV wood pole line) (Dwg I-400S11-SWK-045)	I-400S11-SWK-045 (ENA TS 43-95: Fig. 39)	ENA TS 43-50	122822
Steelwork, LV offset bracket, vertical formation, 4-wire, 500mm	I-400S11-SWK-090 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	109315
Steelwork, LV offset bracket, vertical formation, 4-wire, 750mm	I-400S11-SWK-090 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	109316
Steelwork, LV offset bracket, vertical formation, 4-wire, 1000mm	I-400S11-SWK-090 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	109317
Steelwork, LV offset bracket, vertical formation, 5-wire, 500mm	I-400S11-SWK-091 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	122849
Steelwork, LV offset bracket, vertical formation, 5-wire, 750mm	I-400S11-SWK-091 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	122846
Steelwork, LV offset bracket, vertical formation, 5-wire, 1000mm	I-400S11-SWK-091 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	122847
Steelwork, LV service, pole top extension bracket, size 1, 4kN MFL	I-400S11-SWK-094 (Electricity North West development)	ES400O4	122842
Steelwork, LV service, pole top extension bracket, size 2, 4kN MFL	I-400S11-SWK-094 (Electricity North West development)	ES400O4	122843
Steelwork, LV service, under eaves extension bracket, size 1, 4kN MFL	I-400S11-SWK-095 (Electricity North West development)	ES400O4	122844

SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, LV service, under eaves extension bracket, size 2, 4kN MFL	I-400S11-SWK-095 (Electricity North West development)	ES40004	122845
Steelwork, LV service, under eaves extension bracket	I-400S11-SWK-096 (Electricity North West development)	ES40004	122851
Steelwork, outrigger hook, 22mm hole, pole, ABC	I-400S11-SWK-091 (ENA TS 43-14, Fig. 5)	ES40004	110221
Steelwork, pilot pin (Dwg I-400S11-SWK-011)	I-400S11-SWK-011 (BS 3288-2: 1990)	ES40002 ES40003	128376
Steelwork, property plate/number plate fixing kit, steel towers (Dwg I-400S11-SWK-088)	I-400S11-SWK-088 (Electricity North West development)	Any steel tower	133559
Steelwork, safety-sign fixing kit, steel towers (Dwg I-400S11-SWK-030)	I-400S11-SWK-030 (Electricity North West development)	Any steel tower	133558
Steelwork, sag variation link (universal) (Dwg I-400S11-SWK-012)	I-400S11-SWK-012 (Electricity North West development)	ES40002 ES40003	260850
Steelwork, section strap (Dwg I-400S11-SWK-008)	I-400S11-SWK-008 (ENA TS 43-95: Dwg 439525)	ES40002 ES40003	133345
Steelwork, section strap (light duty) (Dwg I-400S11-SWK-082)	I-400S11-SWK-082 (BS3288-2)	Repair only	133663
Steelwork, section strap, long type (132kV wood pole line) (Dwg I-400S11-SWK-047)	I-400S11-SWK-047 (ENA TS 43-95: Fig. 41)	ENA TS 43-50	122825
Steelwork, section strap, short type (132kV wood pole line) (Dwg I-400S11-SWK-046)	I-400S11-SWK-046 (ENA TS 43-95: Fig. 40)	ENA TS 43-50	122824
Steelwork, shackle, insulator, 15/29 (Dwg I-400S11-SWK-074)	I-400S11-SWK-074 (BS 3288-2: 1990)	ENA TS 43-50 Steel tower TBA	133204
Steelwork, shackle, 28/29 (Dwg I-400S11-SWK-066)	I-400S11-SWK-066 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122830

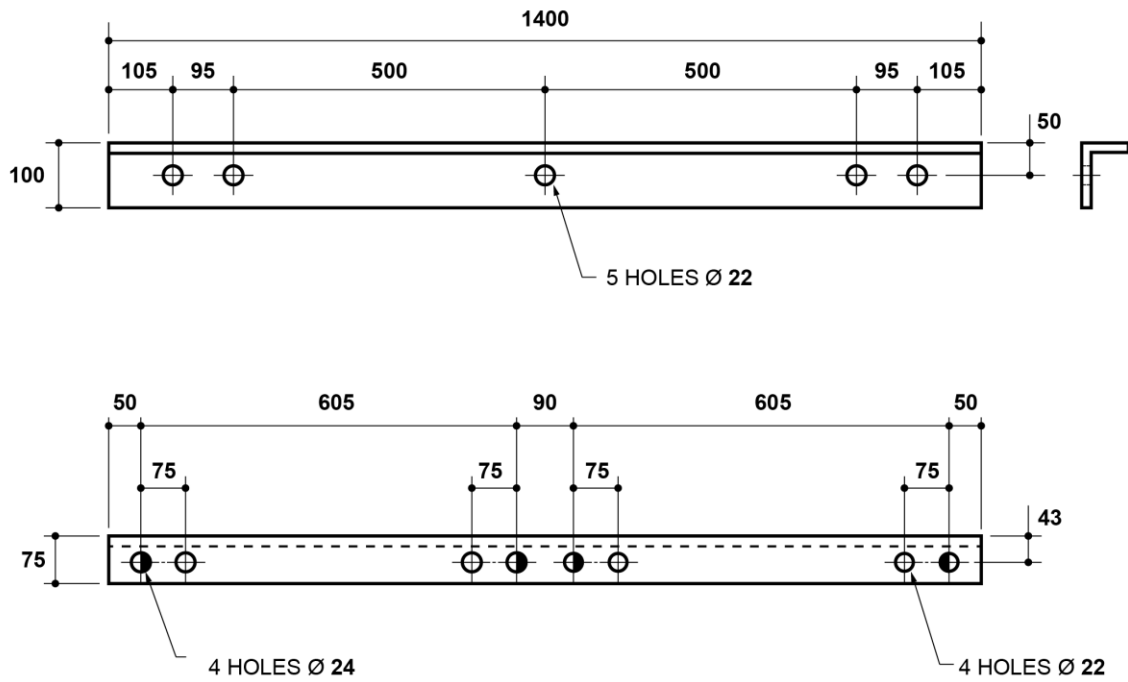
SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, shackle, 42/29 (Dwg I-400S11-SWK-067)	I-400S11-SWK-067 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122831
Steelwork, shackle, 42/29A (Dwg I-400S11-SWK-067)	I-400S11-SWK-067 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122832
Steelwork, socket clevis, 15/84 (Dwg I-400S11-SWK-014)	I-400S11-SWK-014 (BS 3288-2: 1990)	ES40002	122173
Steelwork, socket clevis, 28/31 (Dwg I-400S11-SWK-073)	I-400S11-SWK-073 (BS 3288-2: 1990)	ENA TS 43-50	109594
Steelwork, socket thimble, conductors under 13mm outer diameter (Dwg I-400S11-SWK-032)	I-400S11-SWK-032 (Electricity North West development)	ES40002 ES40003	132234
Steelwork, socket thimble, conductors over 13mm outer diameter (Dwg I-400S11-SWK-033)	I-400S11-SWK-033 (Electricity North West development)	ES40002 ES40003	132233
Steelwork, socket tongue, stay, 28/36A (132kV wood pole line) (Dwg I-400S11-SWK-072)	I-400S11-SWK-072 (ENA TS 43-91: Dwg 439108, K)	ENA TS 43-50	122834
Steelwork, stay outrigger bracket (Dwg I-400S11-SWK-076)	I-400S11-SWK-076 (BEBS L1)	Repair only	110399
Steelwork, stay plate, heavy duty, kit (Dwg I-400S11-SWK-029)	I-400S11-SWK-029 (Electricity North West development)	ES40002 ES40003	260840
Steelwork, stay plate, light duty (Dwg I-400S11-SWK-085)	I-400S11-SWK-085 (ENA TS 43-91: Dwg 439110)	ES40004 ENA TS 43-30	129194
Steelwork, stay strap, heavy duty (132kV wood pole line) (Dwg I-400S11-SWK-065)	I-400S11-SWK-065 (ENA TS 43-91: Dwg 439113)	ENA TS 43-50	122835
Steelwork, support plate, surge diverter (132kV wood pole line) (Dwg I-400S11-SWK-055)	I-400S11-SWK-055 (ENA TS 43-95: Fig. 49)	ENA TS 43-50	122840
Steelwork, support, cable cleats (132kV wood pole line) (Dwg I-400S11-SWK-054)	I-400S11-SWK-054 (ENA TS 43-95: Fig. 48)	ENA TS 43-50	122838

03/08/21

SCHEDULE OF ALL OHL STEELWORK

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, support, sealing end (132kV wood pole line) (Dwg I-400S11-SWK-053)	I-400S11-SWK-053 (ENA TS 43-95: Fig. 47)	ENA TS 43-50	122839
Steelwork, terminal strap (Dwg I-400S11-SWK-009)	I-400S11-SWK-009 (ENA TS 43-95: Dwg 439528)	ES40002 ES40003	133361
Steelwork, thimble, open-ended, stay (Dwg I-400S11-SWK-075)	I-400S11-SWK-075 (ENA TS 43-91)	All wood pole lines	132241
Steelwork, transformer platform kit, H-pole (Dwg I-400S11-SWK-019)	I-400S11-SWK-019 (ENA TS 43-95: Dwg 439524)	ES40002 ES40003	* 133213
Steelwork, transformer platform kit, single pole (Dwg I-400S11-SWK-018)	I-400S11-SWK-018 (ENA TS 43-95: Dwg 439523)	ES40002 ES40003 ES40004	* 133396
Steelwork, wall bracket, 3 legs (Dwg I-400S11-SWK-077)	I-400S11-SWK-077 (Electricity North West development)	ES40004 LV Services	110396
Steelwork, wall bracket, corner (Dwg I-400S11-SWK-084)	I-400S11-SWK-084 (ENA TS 43-95)	LV Services	110397
Steelwork, wall bracket, flat (Dwg I-400S11-SWK-083)	I-400S11-SWK-083 (ENA TS 43-95)	LV Services	110398
Steelwork, wall mounting, hook plate (LV ABC service clamps)	Not drawn	ES40004 LV Services	110389
Steelwork, yoke plate, stay, 42/42 (132kV wood pole line) (Dwg I-400S11-SWK-071)	I-400S11-SWK-071 (ENA TS 43-91: Dwg 439108, H)	ENA TS 43-50	122836
* CC number for the kit. If individual items are required, identify them by the drawing sheet numbers, eg I-400S11-SWK-015-25-2, I-400S11-SWK-015-55-2.			



SECTION : 100 X 75 X 12 TO BS EN10025

CC 133200

STEELWORK
CROSSARM
SINGLE POLE
INTERMEDIATE / PIN ANGLE / STRAIGHT
LINE SECTION / ANGLE SECTION

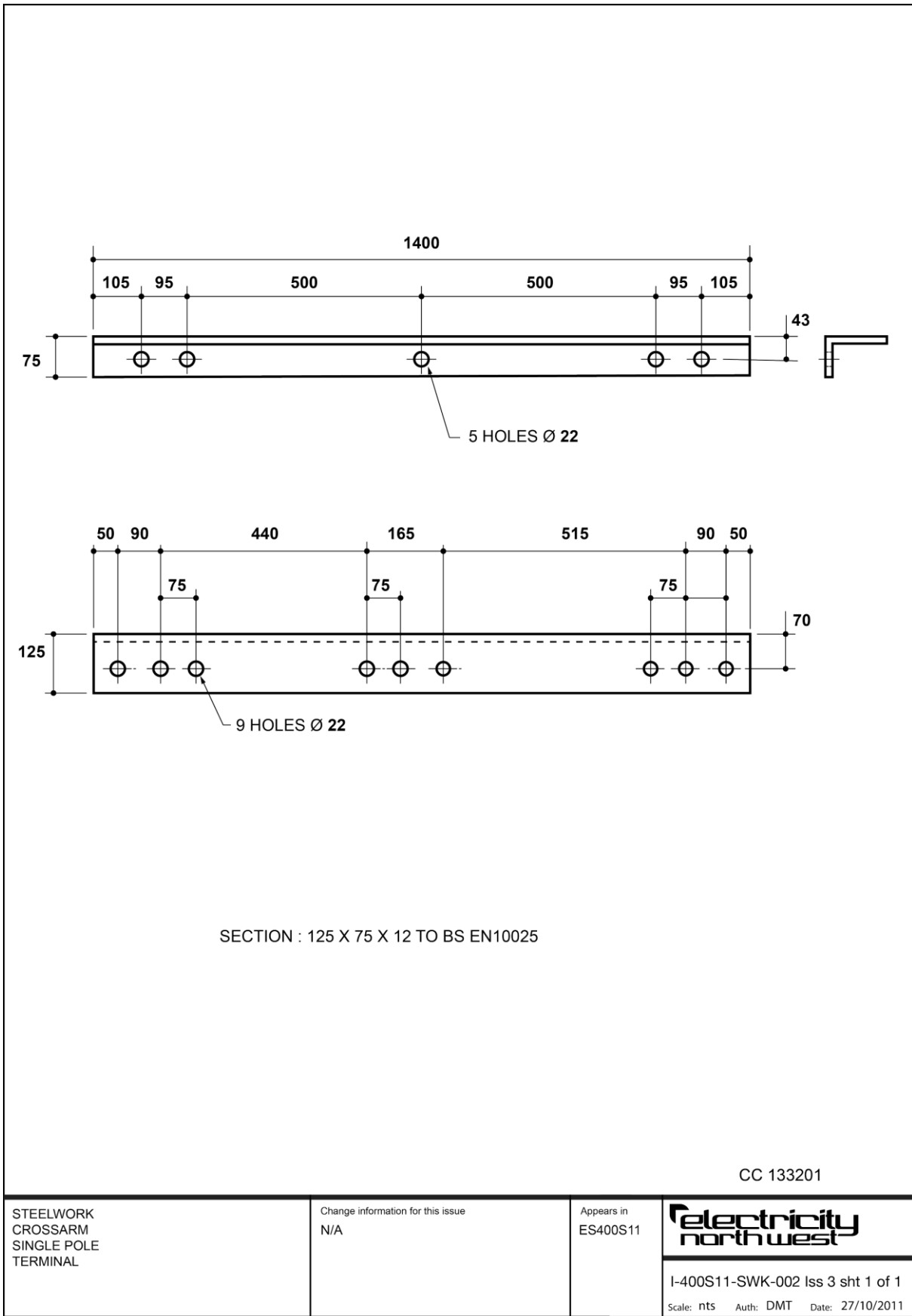
Change information for this issue
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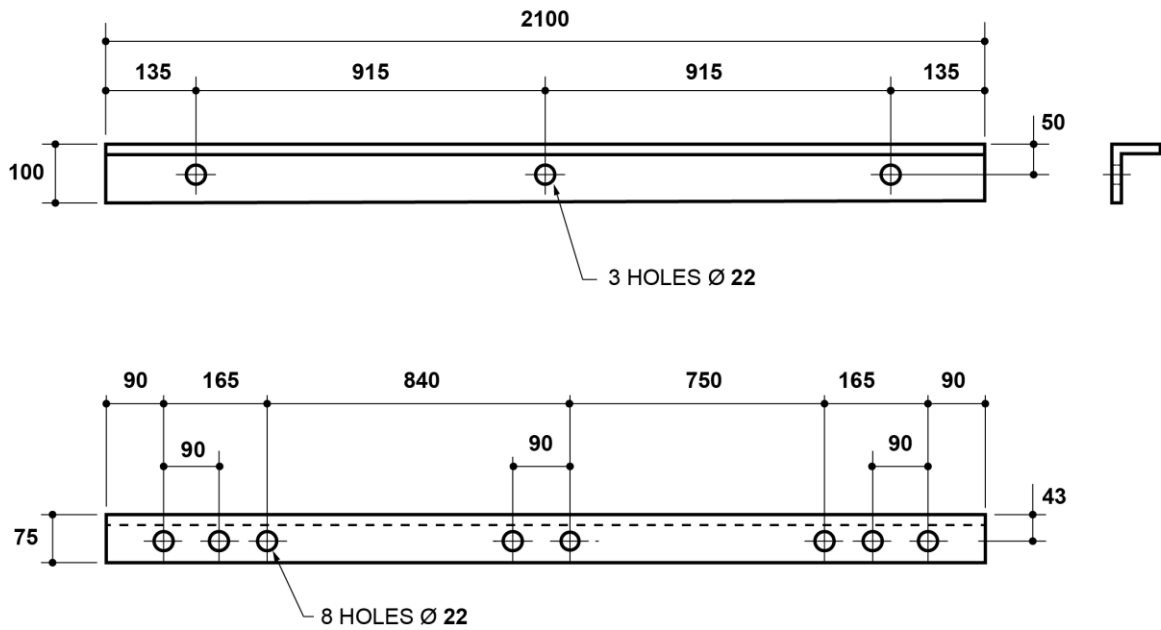
Appears in
ES400S11

electricity north west

I-400S11-SWK-001 Iss 3 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011





SECTION : 100 X 75 X 12 TO BS EN10025

CC 133202

STEELWORK
CROSSARM
H-POLE
STRAIGHT LINE SECTION /
ANGLE SECTION

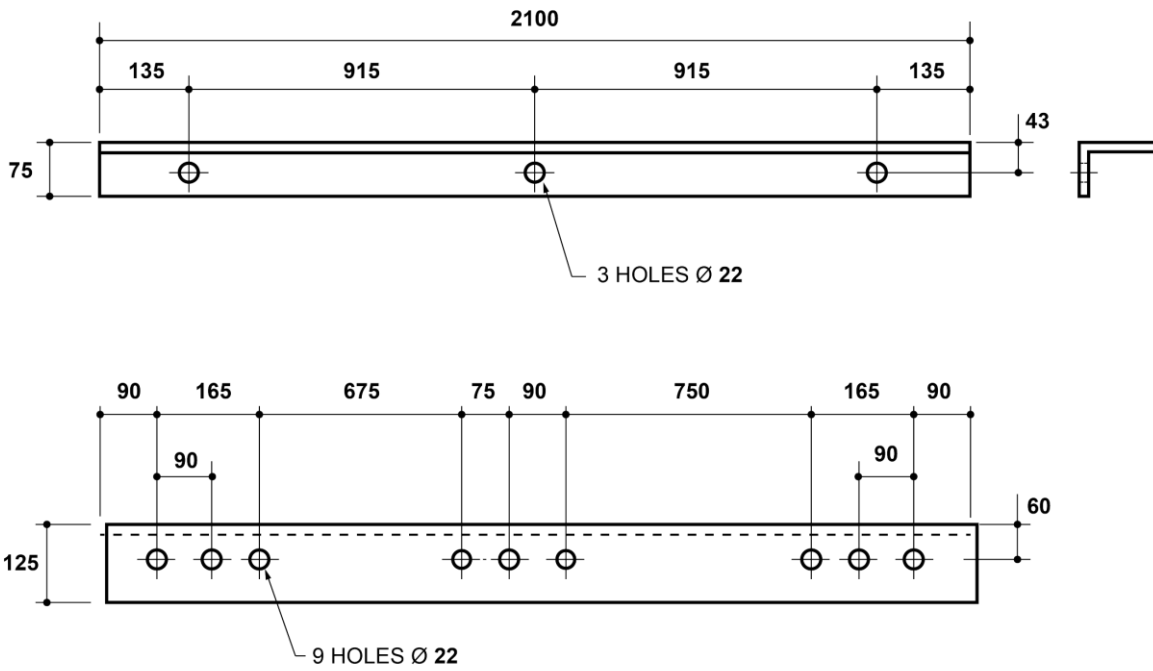
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-003 Iss 3 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



SECTION : 125 X 75 X 12 TO BS EN10025

CC 133203

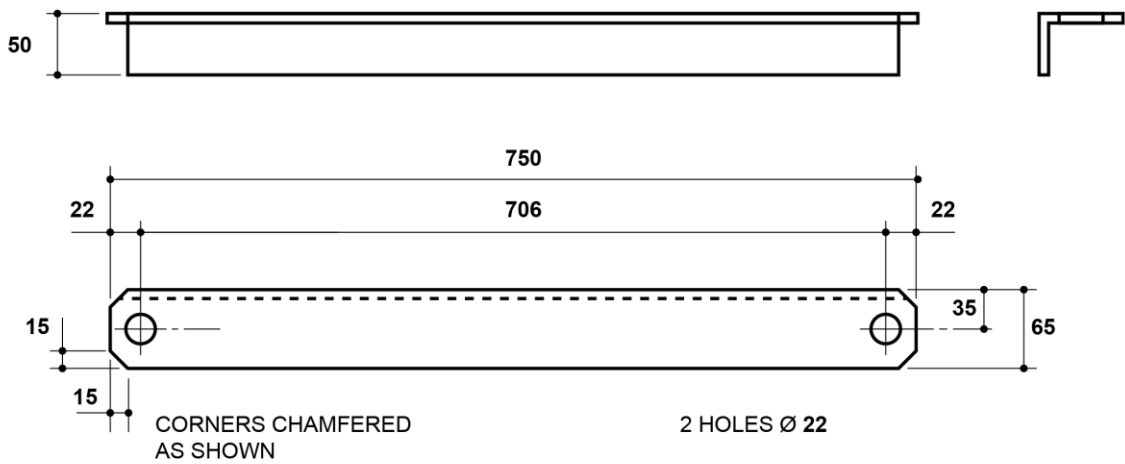
STEELWORK
CROSSARM
H-POLE
TERMINAL

Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-004 Iss 3 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011



SECTION: 65 X 50 X 8 BSUA

CC 133353

STEELWORK
CROSSARM STRUT
(TIE STRAP)

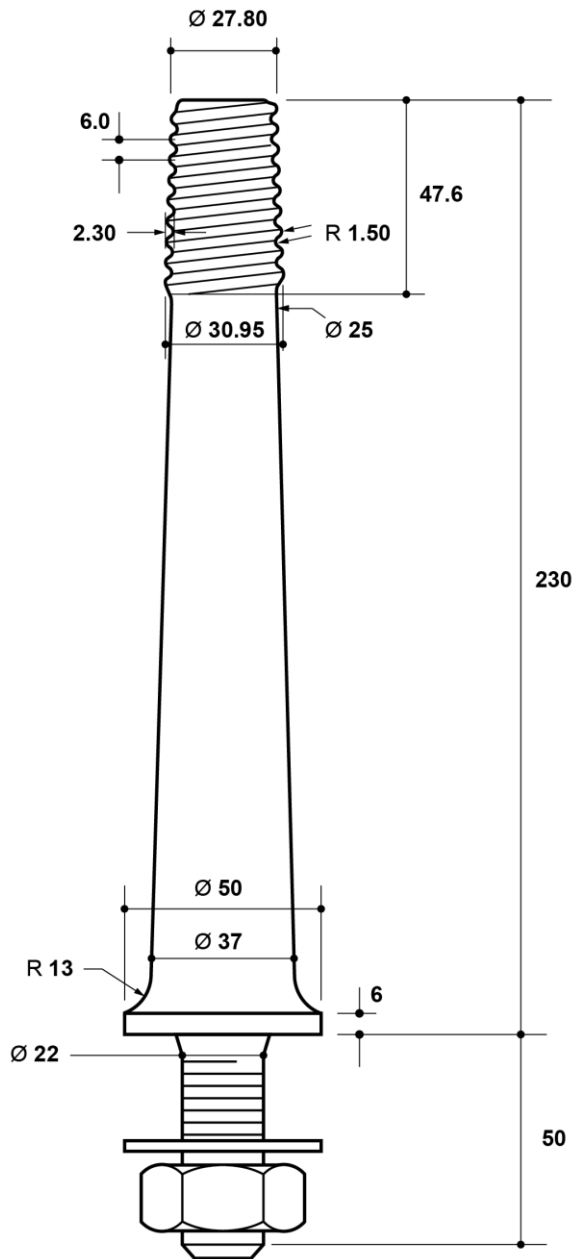
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-005 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



CC 128252

STEELWORK
INSULATOR PIN
(11kV) (10kN)

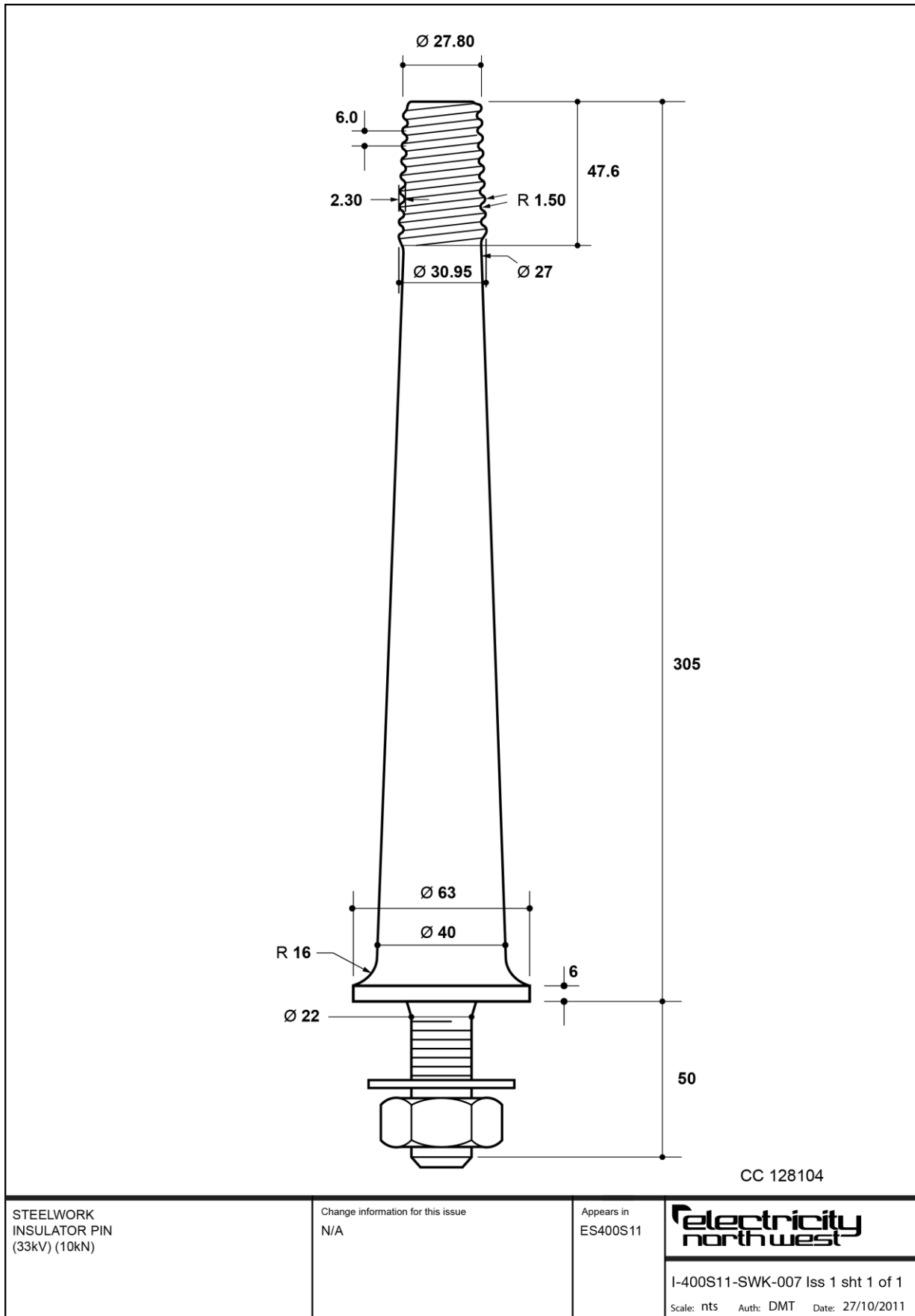
Change information for this issue
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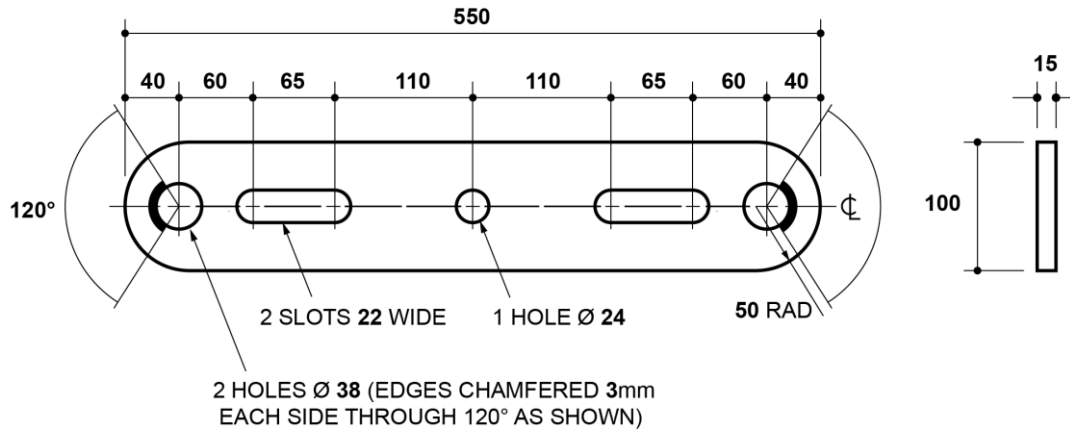
Appears in
ES400S11

electricity north west

I-400S11-SWK-006 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011





CC 133345

STEELWORK
SECTION STRAP

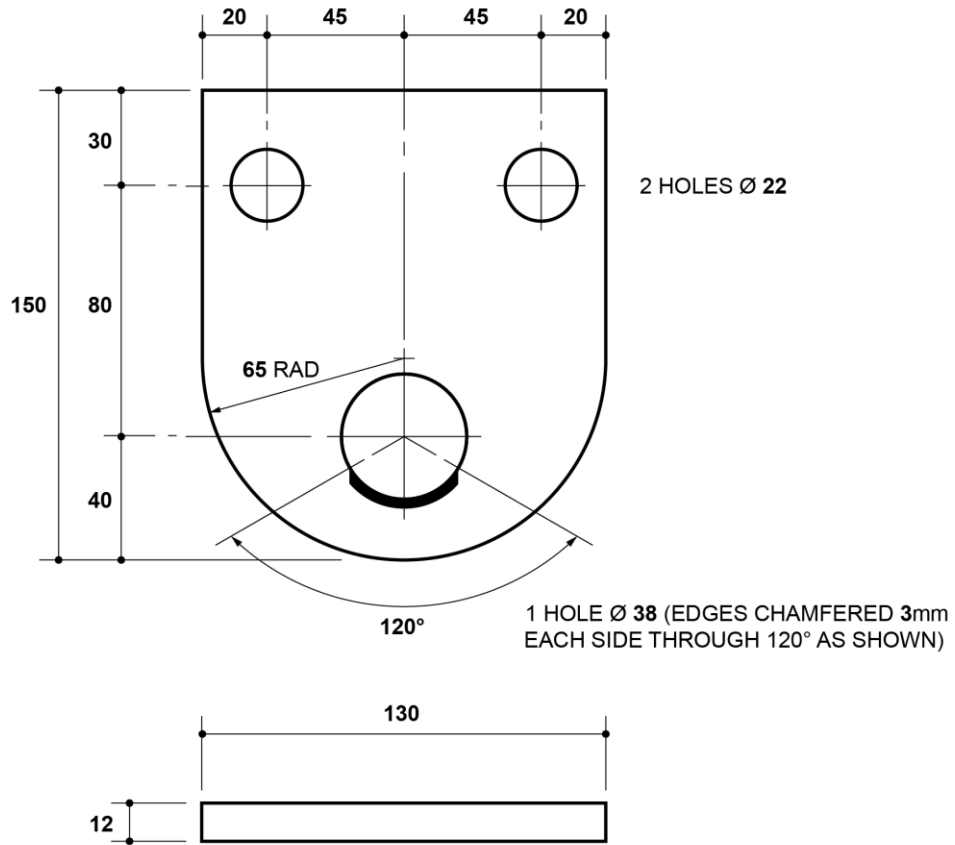
Change information for this issue
N/A

Appears in
ES400S11

**electricity
north west**

I-400S11-SWK-008 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



CC 133361

STEELWORK
TERMINAL STRAP

Change information for this issue
N/A

Appears in
ES400S11

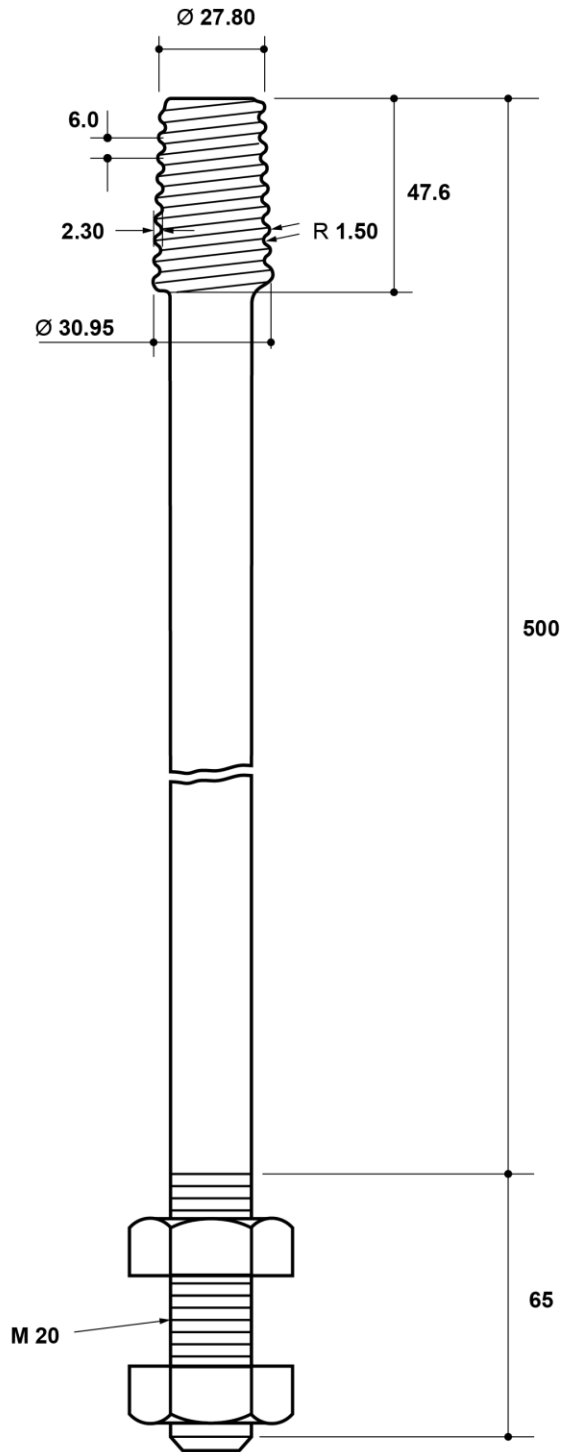
**electricity
north west**

I-400S11-SWK-009 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011

I-400S11-SWK-010

NOTE THAT TIE RODS HAVE BEEN MOVED TO ES400F1



CC 128376

STEELWORK
PILOT PIN

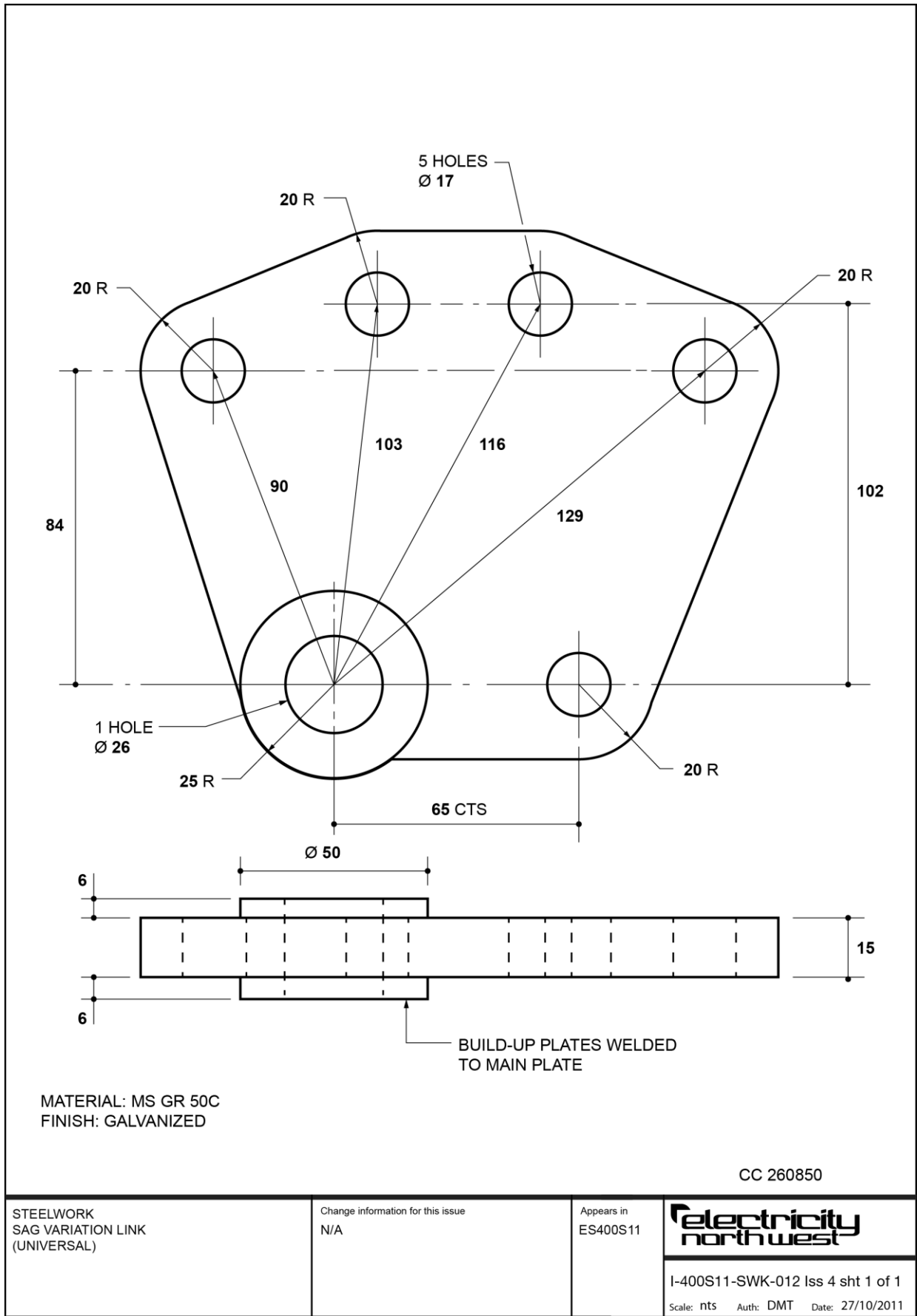
Change information for this issue
N/A

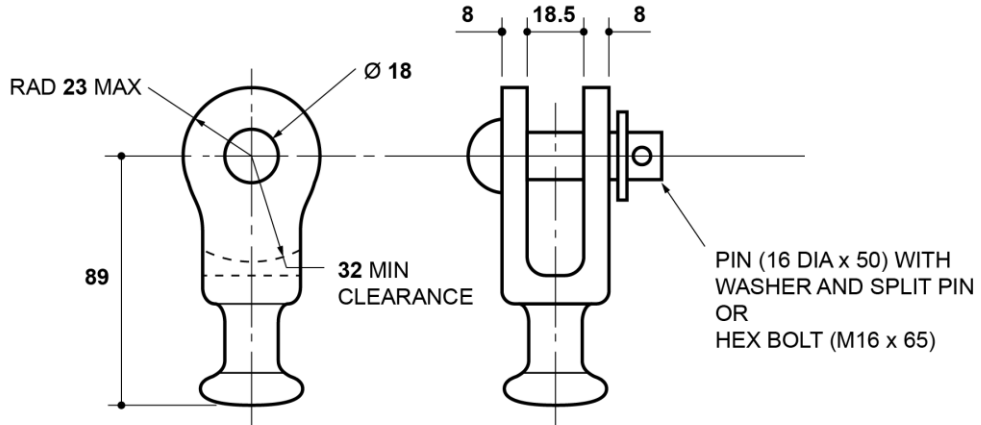
Appears in
ES400S11

**electricity
north west**

I-400S11-SWK-011 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011





CC 122114

STEELWORK
BALL CLEVIS

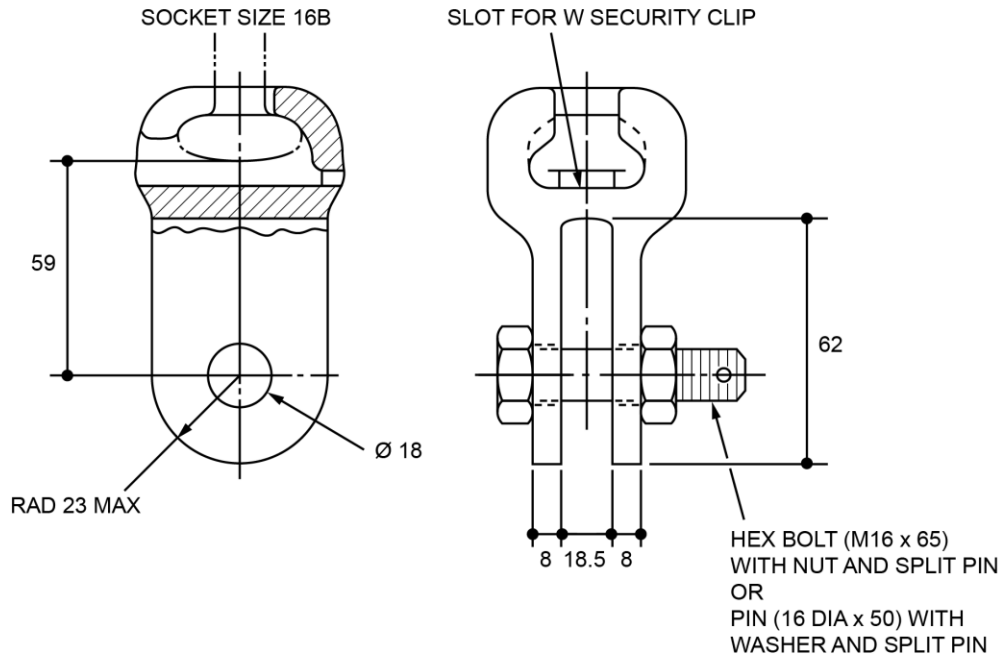
Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-013 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



NOTE
SECURITY CLIP, BOLT, NUT AND SPLIT PIN OR
SECURITY CLIP, PIN, WASHER AND SPLIT PIN
INCLUDED

CC 122173

STEELWORK
SOCKET CLEVIS, 15/84

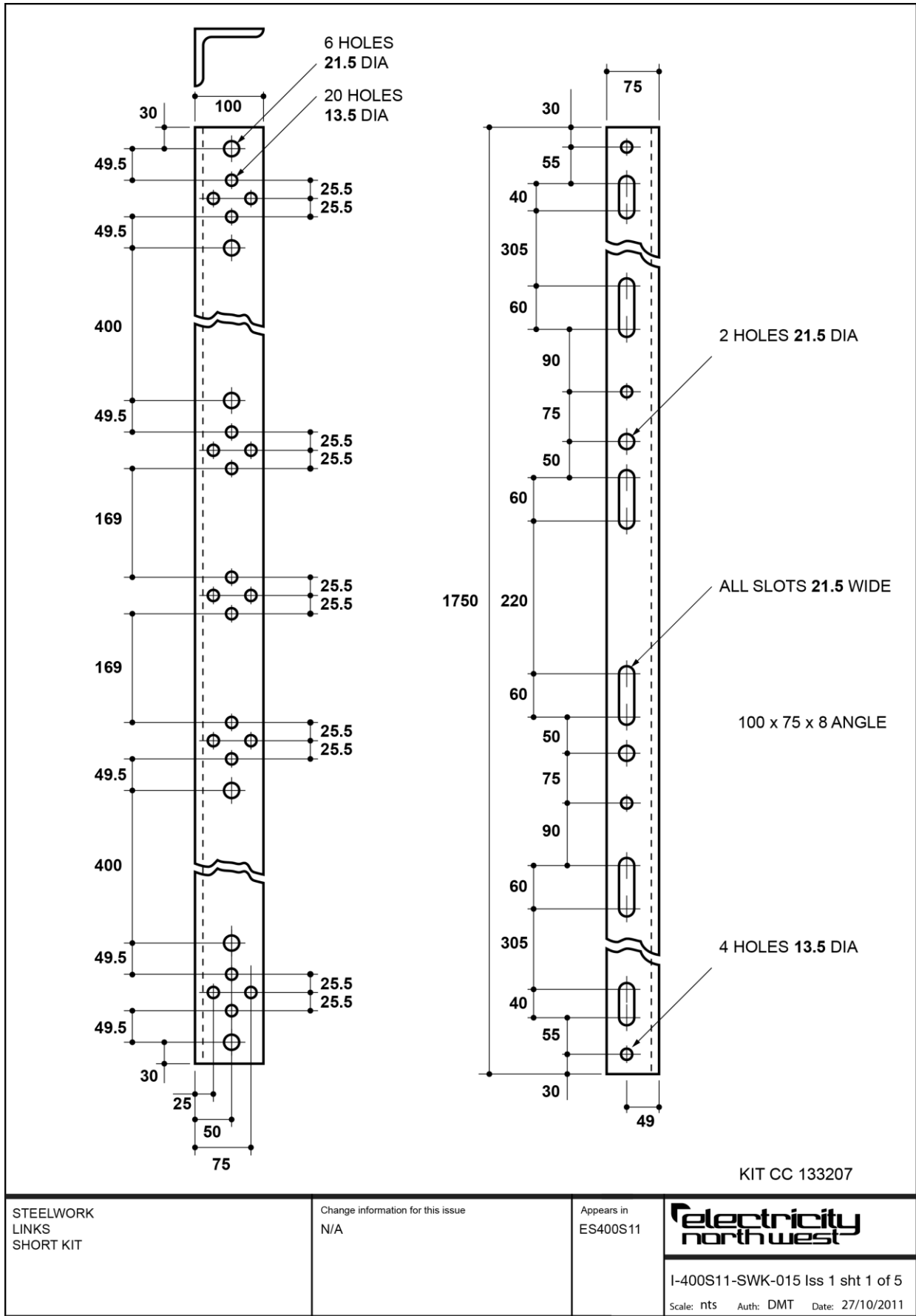
Change information for this issue
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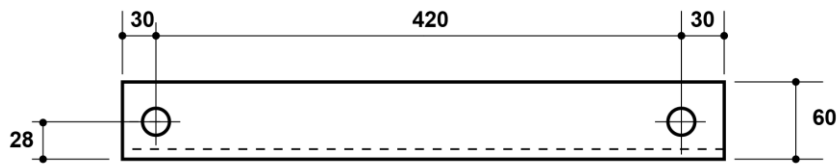
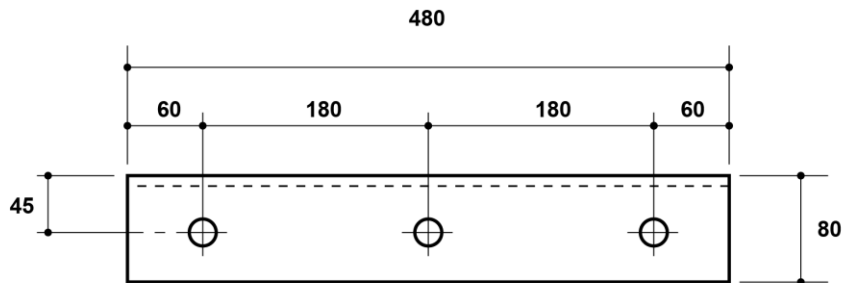
Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-014 Iss 3 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011





HOLES 21.5 DIA

80 x 60 x 6 ANGLE

KIT CC 133207

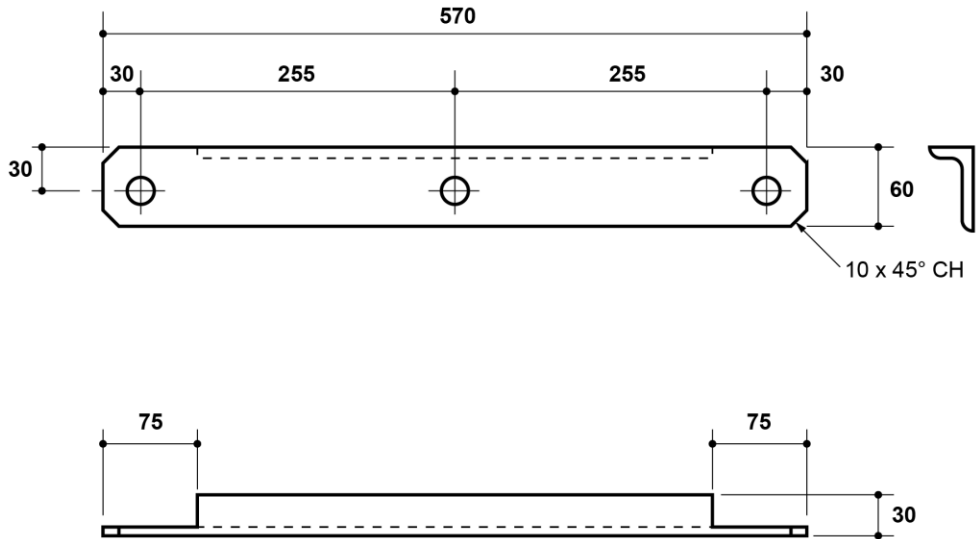
STEELWORK
LINKS
SHORT KIT

Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-015 Iss 1 sht 2 of 5
Scale: nts Auth: DMT Date: 27/10/2011



HOLES 21.5 DIA

60 x 30 x 6 ANGLE

KIT CC 133207

STEELWORK
LINKS
SHORT KIT

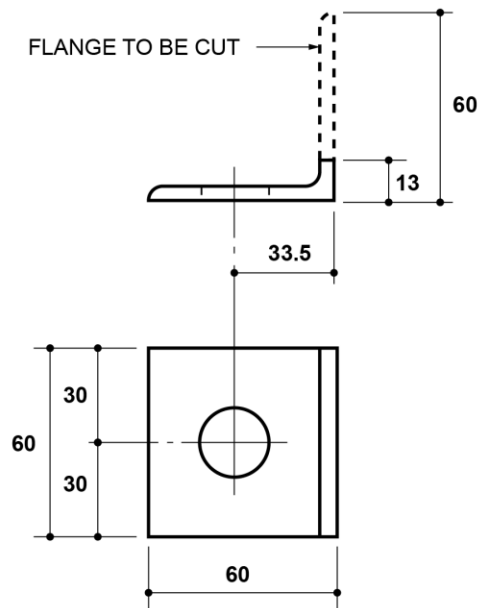
Change information for this issue
N/A

Appears in
ES400S11



I-400S11-SWK-015 Iss 1 sht 3 of 5

Scale: nts Auth: DMT Date: 27/10/2011



HOLE 21.5 DIA

60 x 60 x 5 ANGLE

KIT CC 133207

STEELWORK
LINKS
SHORT KIT

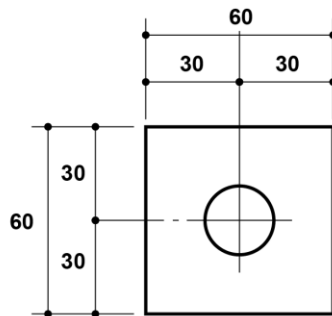
Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-015 Iss 1 sht 4 of 5

Scale: nts Auth: DMT Date: 27/10/2011



HOLE 21.5 DIA

60 x 60 PLATE

KIT CC 133207

STEELWORK
LINKS
SHORT KIT

Change information for this issue
N/A

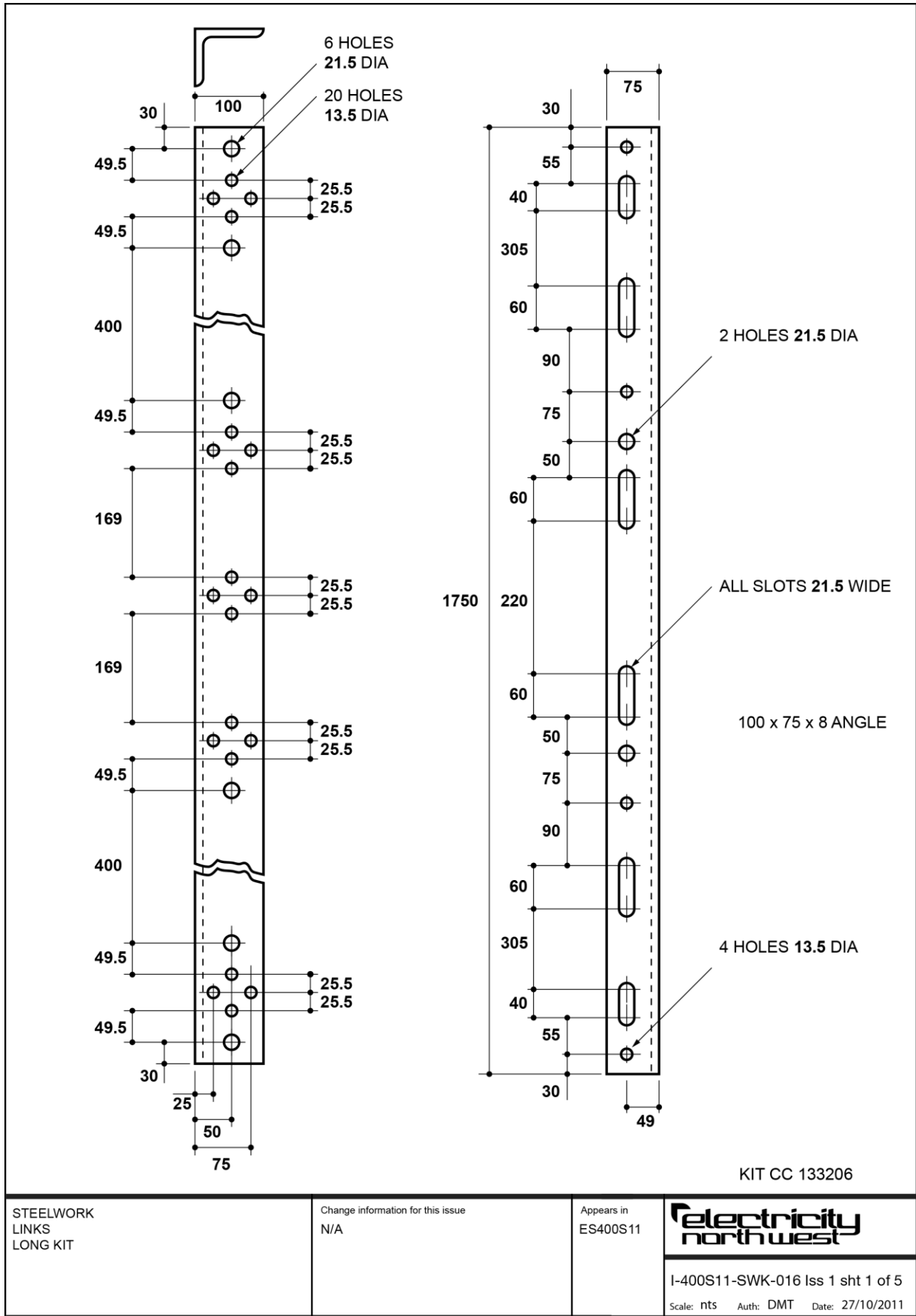
Appears in
ES400S11

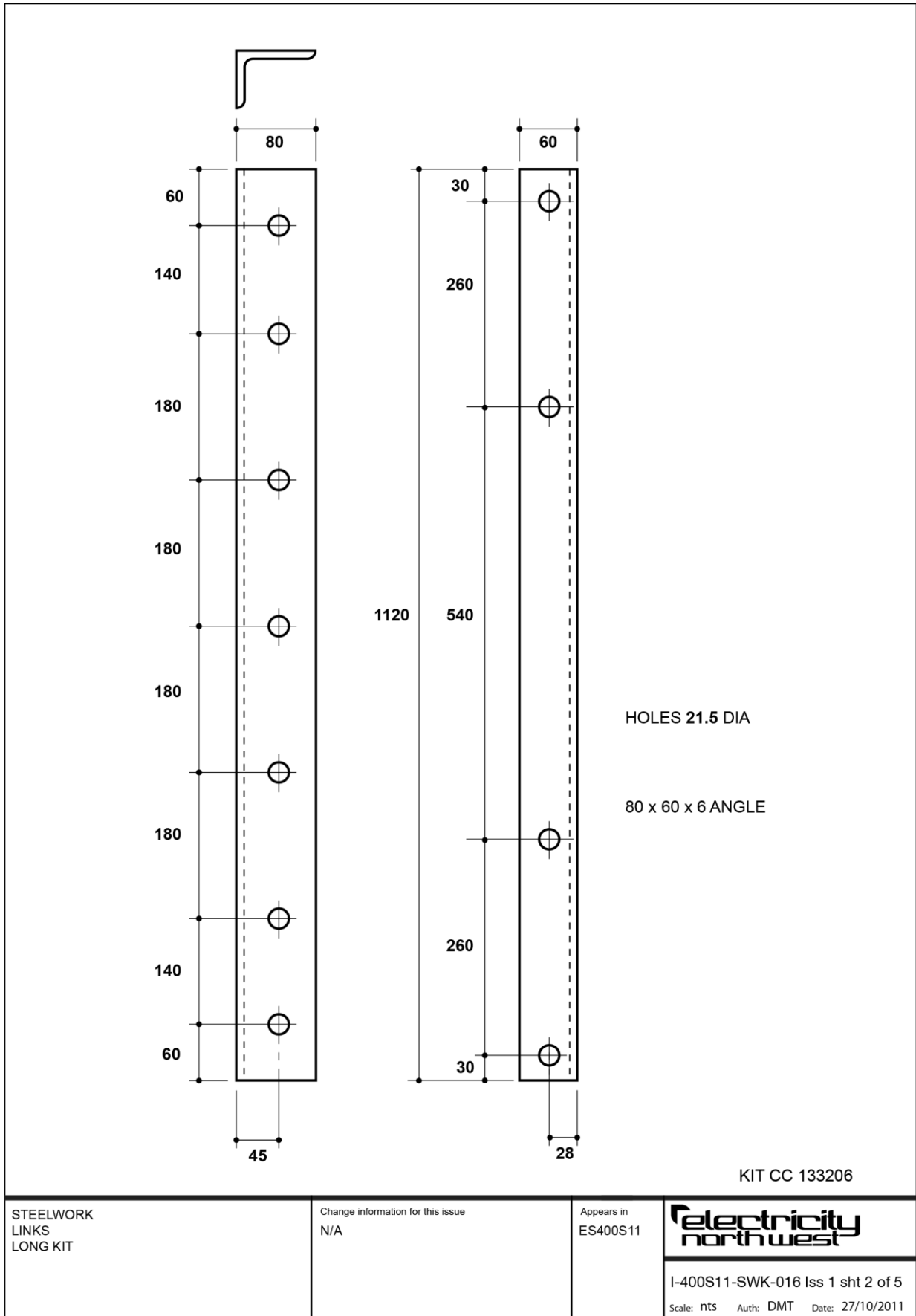
**electricity
north west**

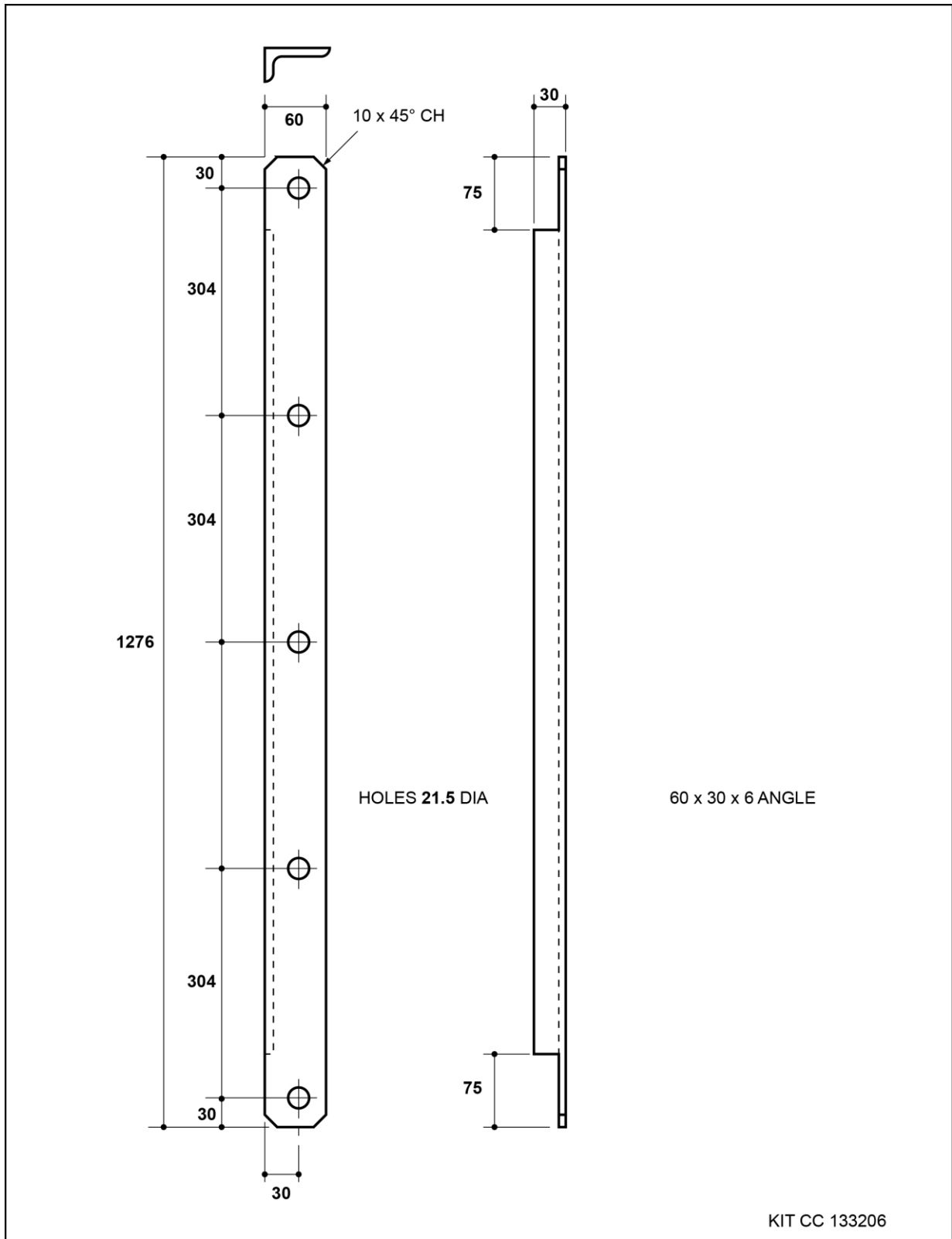
I-400S11-SWK-015 Iss 1 sht 5 of 5
Scale: nts Auth: DMT Date: 27/10/2011

STEELWORK, LINKS, SHORT KIT

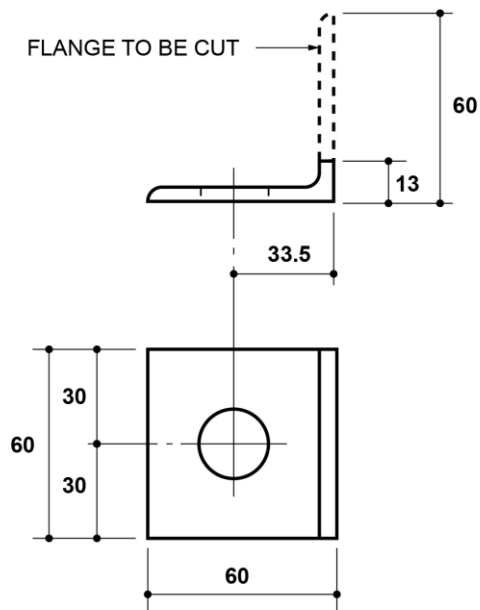
Drawing No: I-400S11-SWK-015			
Description	ES Ref No	CC number	Quantity
Dwg I-400S11-SWK-015-15	ES400S11	-	1
Dwg I-400S11-SWK-015-25	ES400S11	-	2
Dwg I-400S11-SWK-015-35	ES400S11	-	2
Dwg I-400S11-SWK-015-45	ES400S11	-	2
Dwg I-400S11-SWK-015-55	ES400S11	-	1
Plate as per Dwg I-400S11-SWK-015-55, but dimensions 60x4 (not illustrated)	ES400S11	-	1
Bolt, tie rod, M20, length 330mm, thread length 120mm, galvanized, c/w four hex full nuts	ES400F1	133388	2
Washer, round, flat, 22mm hole, outer dia 37mm, thickness 3mm, galvanized	ES400F1	993018	12
Bolt/nut, M20, 40mm	ES400F1	-	2
Bolt, M20, length 60mm, thread length 46mm, galvanized, c/w hex full nut	ES400F1	107581	2







<p>STEELWORK LINKS LONG KIT</p>	<p>Change information for this issue N/A</p>	<p>Appears in ES400S11</p>	<p>Electricity north west I-400S11-SWK-016 Iss 1 sht 3 of 5 Scale: nts Auth: DMT Date: 27/10/2011</p>
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HOLE 21.5 DIA

60 x 60 x 5 ANGLE

KIT CC 133206

STEELWORK
LINKS
LONG KIT

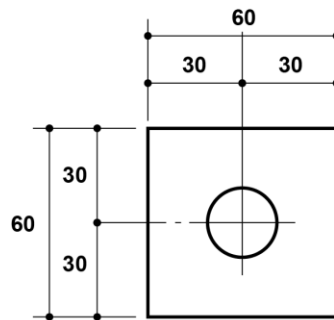
Change information for this issue
N/A

Appears in
ES400S11

**electricity
north west**

I-400S11-SWK-016 Iss 1 sht 4 of 5

Scale: nts Auth: DMT Date: 27/10/2011



HOLE 21.5 DIA

60 x 2 PLATE

KIT CC 133206

STEELWORK
LINKS
LONG KIT

Change information for this issue
N/A

Appears in
ES400S11

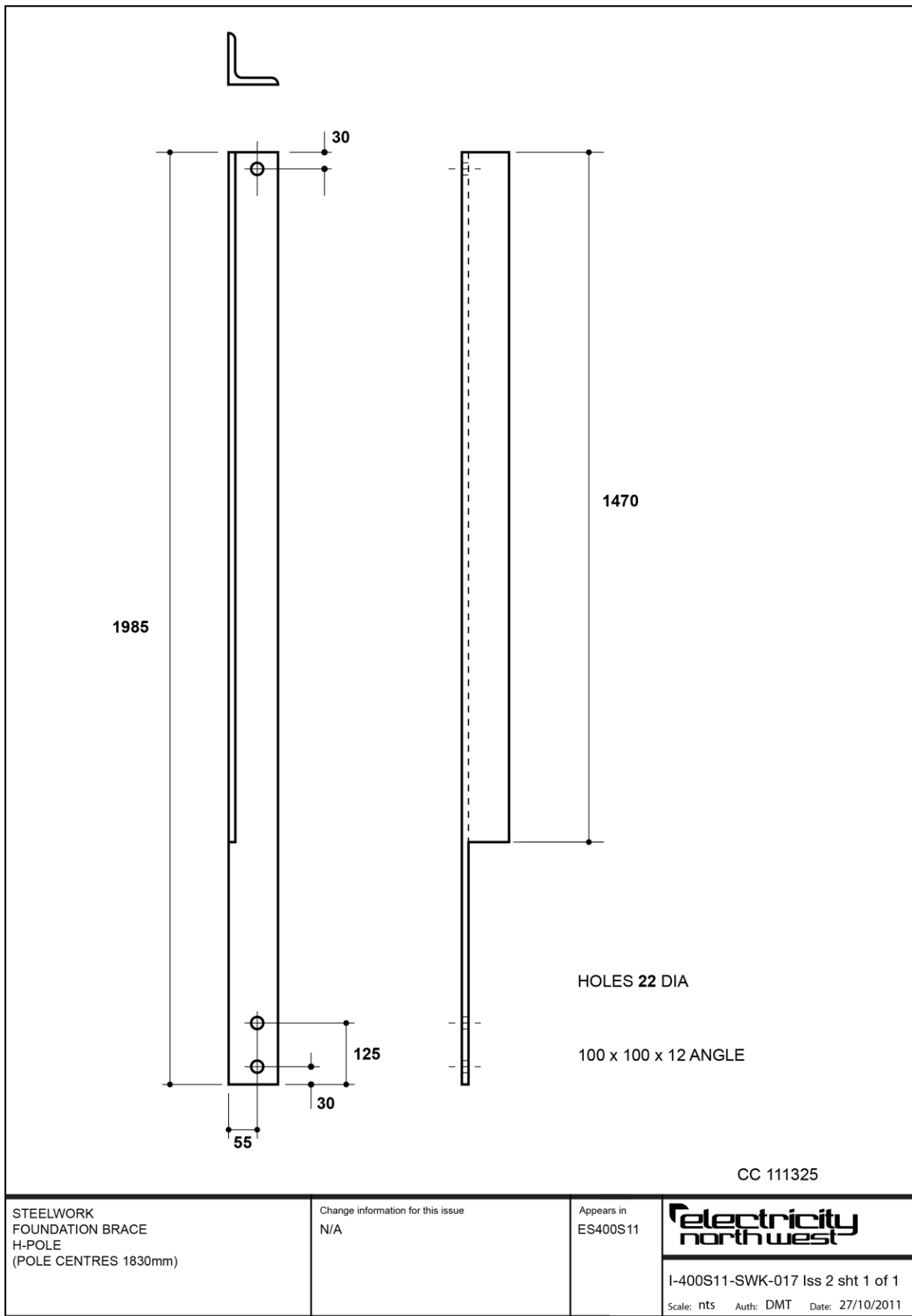
**electricity
north west**

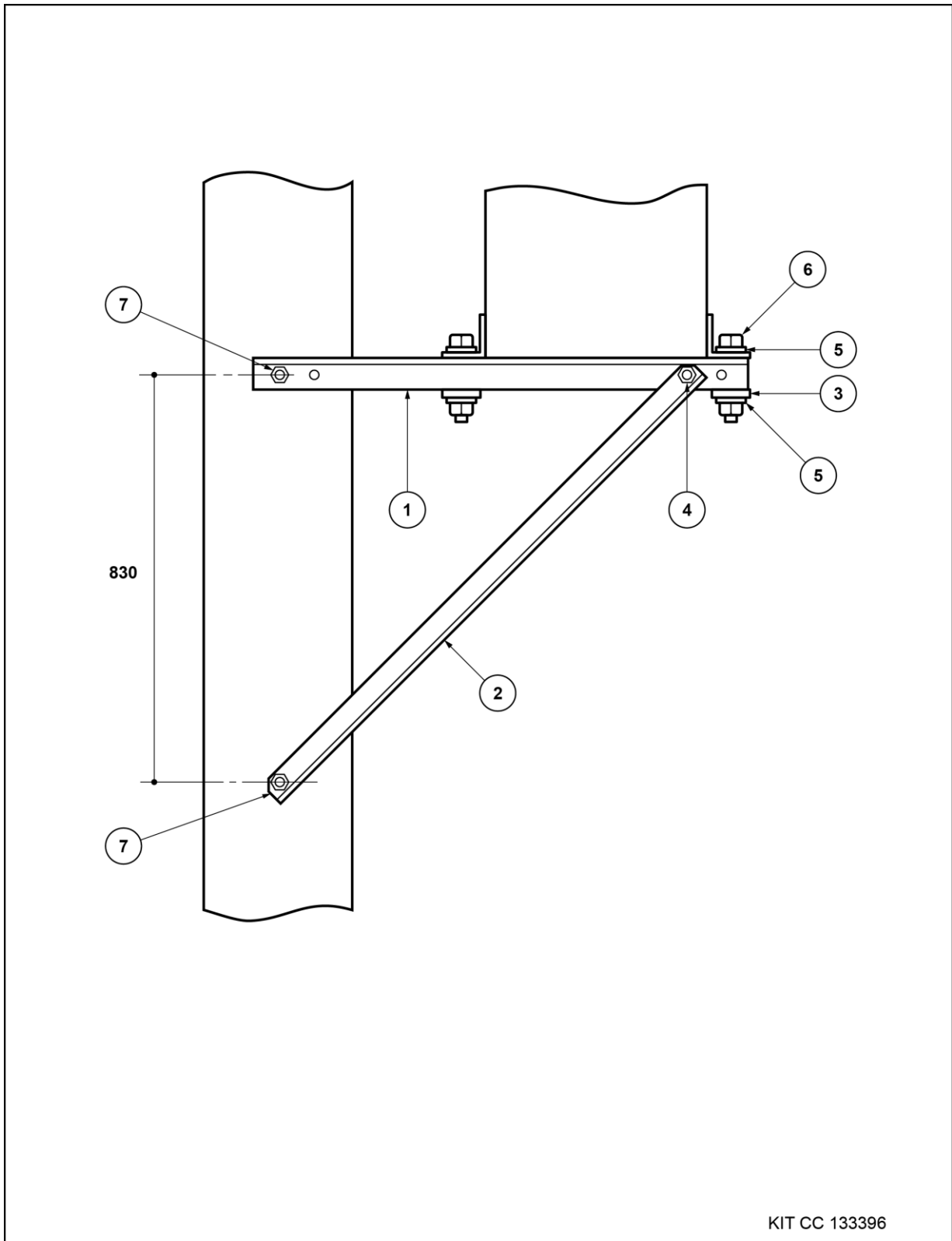
I-400S11-SWK-016 Iss 1 sht 5 of 5

Scale: nts Auth: DMT Date: 27/10/2011

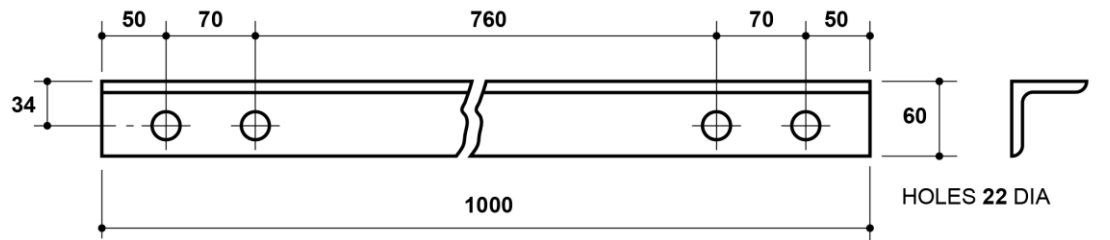
STEELWORK, LINKS, LONG KIT

Description	Drawing No: I-400S11-SWK-016		
	ES Ref No	CC number	Quantity
Dwg I-400S11-SWK-016-15	ES400S11	-	1
Dwg I-400S11-SWK-016-25	ES400S11	-	2
Dwg I-400S11-SWK-016-35	ES400S11	-	2
Dwg I-400S11-SWK-016-45	ES400S11	-	2
Dwg I-400S11-SWK-016-55	ES400S11	-	1
Plate as per Dwg I-400S11-SWK-016-55, but dimensions 60x4 (not illustrated)	ES400S11	-	1
Bolt, tie rod, M20, length 330mm, thread length 120mm, galvanized, c/w four hex full nuts	ES400F1	133388	2
Washer, round, flat, 22mm hole, outer dia 37mm, thickness 3mm, galvanized	ES400F1	993018	12
Bolt/nut, M20, 40mm	ES400F1	-	2
Bolt, M20, length 60mm, thread length 46mm, galvanized, c/w hex full nut	ES400F1	107581	2

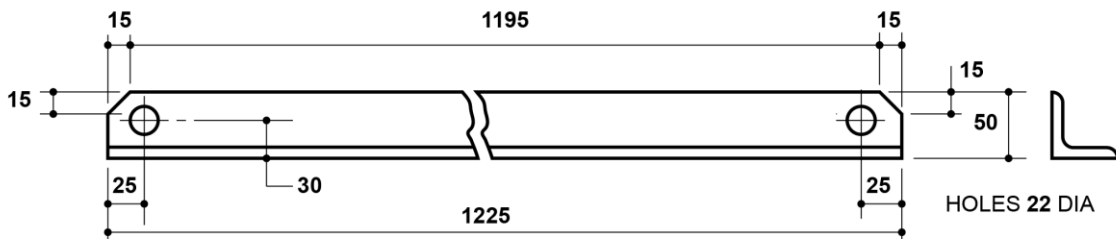




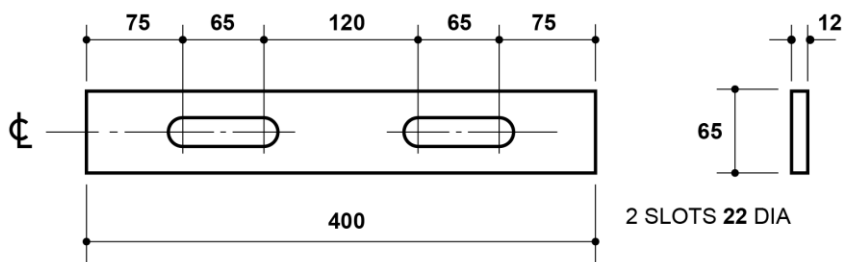
<p>STEELWORK TRANSFORMER PLATFORM KIT SINGLE POLE</p>	<p>Change information for this issue N/A</p>	<p>Appears in ES400S11</p>	<p>electricity north west I-400S11-SWK-018 Iss 2 sht 1 of 2 Scale: nts Auth: DMT Date: 27/10/2011</p>
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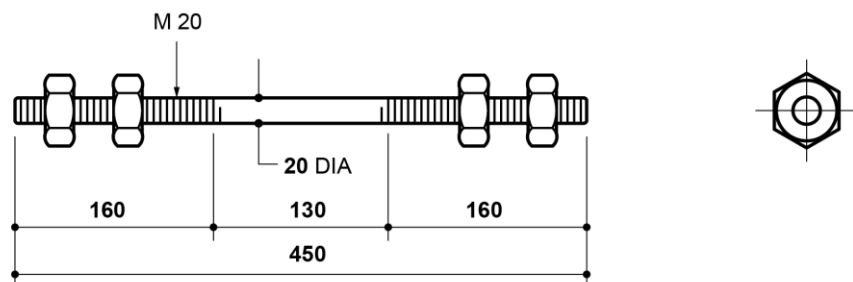
ITEM ① 60 x 60 x 6 BSEA



ITEM ② 50 x 50 x 6 BSEA



ITEM ③



ITEM ④ CC 130117

KIT CC 133396

STEELWORK
TRANSFORMER PLATFORM KIT
SINGLE POLE

Change information for this issue
N/A

Appears in
ES400S11

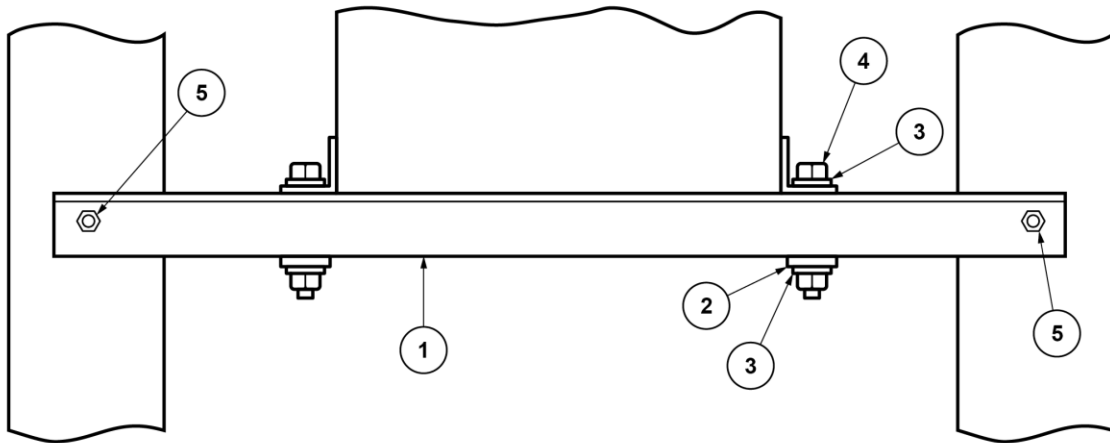


I-400S11-SWK-018 Iss 2 sht 2 of 2

Scale: nts Auth: DMT Date: 27/10/2011

STEELWORK, TRANSFORMER PLATFORM KIT, SINGLE POLE

		Drawing No: I-400S11-SWK-018		
Item Number (refer to drawing)	Description	ES Ref No	CC number	Quantity
1	Item 1 of drawing I-400S11-SWK-018	ES400S11	-	2
2	Item 2 of drawing I-400S11-SWK-018	ES400S11	-	2
3	Item 3 of drawing I-400S11-SWK-018	ES400S11	-	2
4	Bolt, tie rod, M20, length 450mm, thread length 160mm, galvanized, c/w four hex full nuts	ES400F1	130117	1
5	Washer, round, flat, 22mm hole, outer dia 37mm, thickness 3mm, galvanized	ES400F1	993018	8
6	Bolt, M20, length 100mm, thread length 46mm, galvanized, c/w hex full nut	ES400F1	107646	4
7	Bolt, M20, length 300mm, thread length 150mm, galvanized, c/w hex full nut	ES400F1	107735	2



KIT CC 133213

STEELWORK
TRANSFORMER PLATFORM KIT
H-POLE

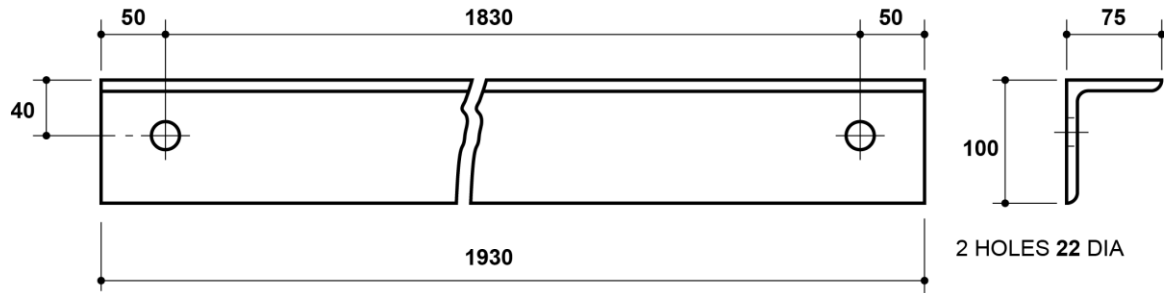
Change information for this issue
N/A

Appears in
ES400S11

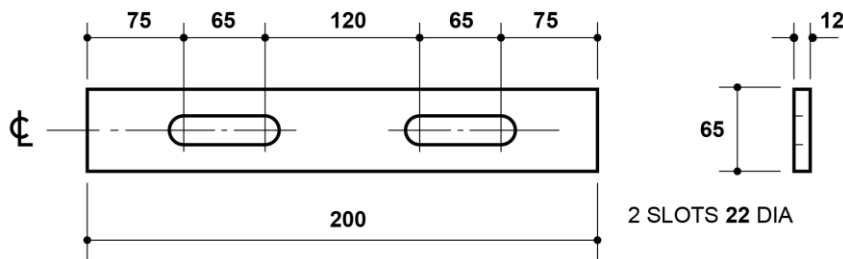


I-400S11-SWK-019 Iss 2 sht 1 of 2

Scale: nts Auth: DMT Date: 27/10/2011



ITEM ① 100 x 75 x 10 BSUA



ITEM ②

KIT CC 133213

STEELWORK
TRANSFORMER PLATFORM KIT
H-POLE

Change information for this issue
N/A

Appears in
ES400S11

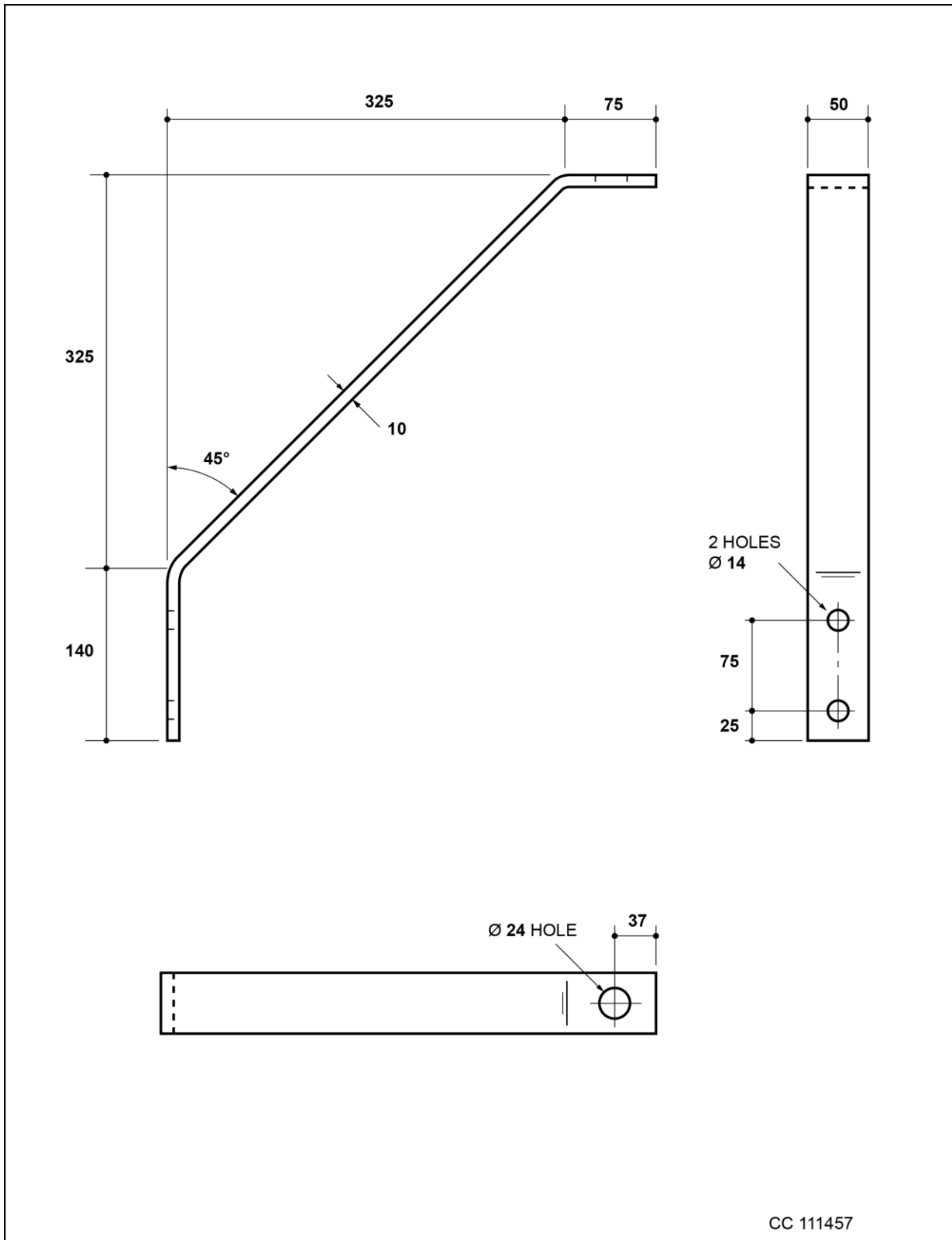


I-400S11-SWK-019 Iss 2 sht 2 of 2

Scale: nts Auth: DMT Date: 27/10/2011

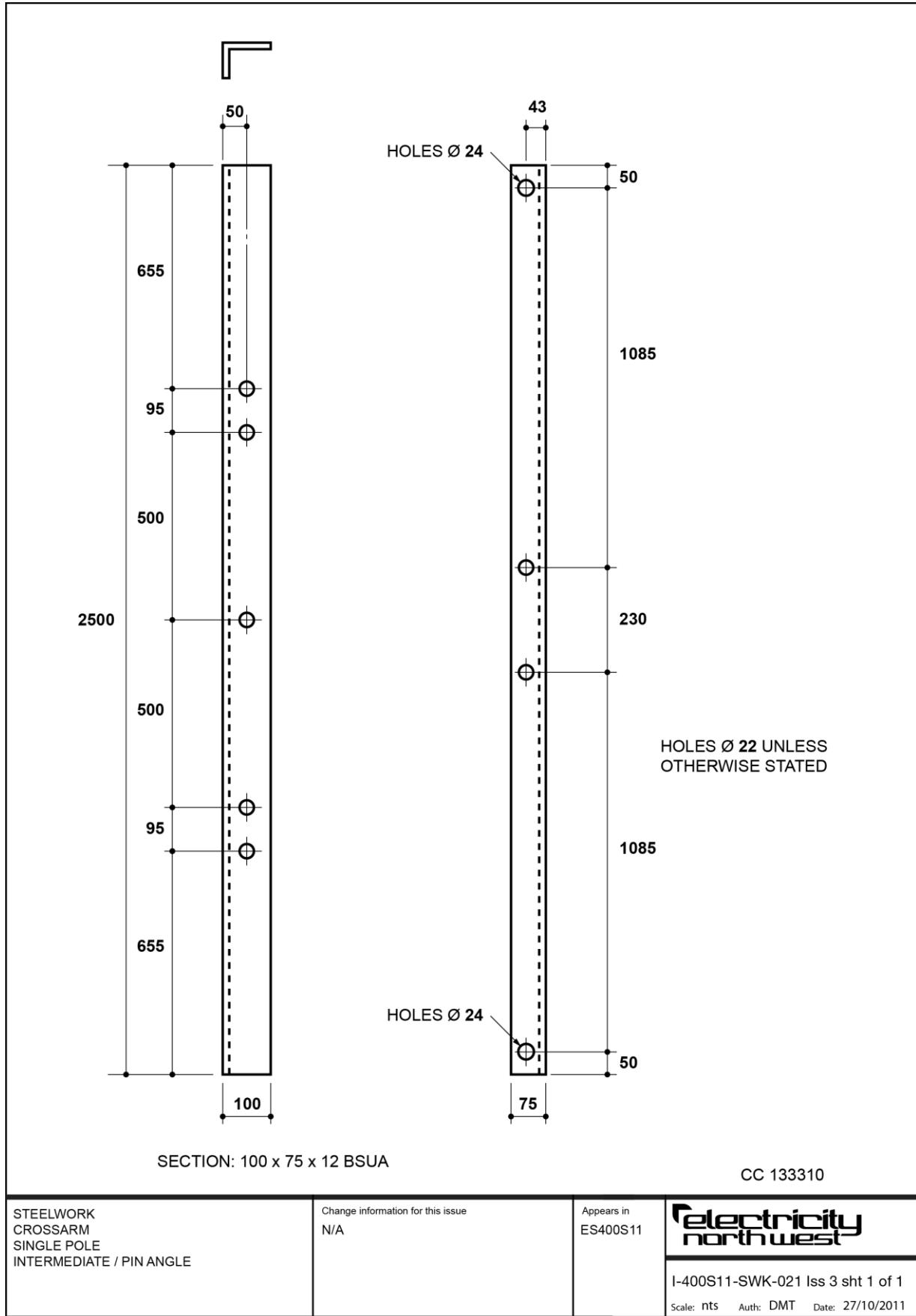
STEELWORK, TRANSFORMER PLATFORM KIT, H-POLE

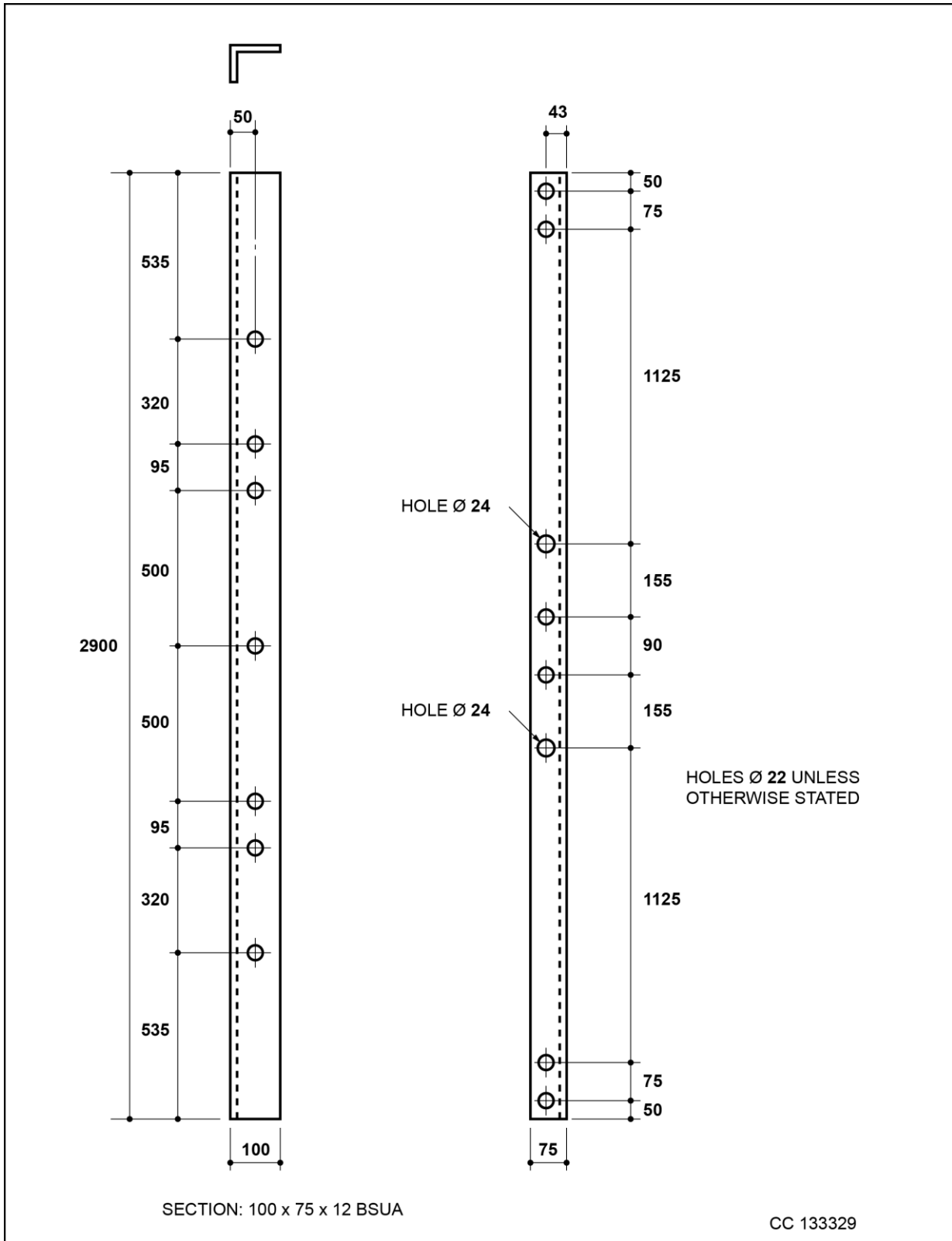
		Drawing No: I-400S11-SWK-019		
Item Number (refer to drawing)	Description	ES Ref No	CC number	Quantity
1	Item 1 of drawing I-400S11-SWK-019	ES400S11	-	2
2	Item 2 of drawing I-400S11-SWK-019	ES400S11	-	2
3	Washer, round, flat, 22mm hole, outer dia 37mm, thickness 3mm, galvanized	ES400F1	993018	8
4	Bolt, M20, length 160mm, thread length 115mm, galvanized, c/w hex full nut	ES400F1	107654	4
5	Bolt, M20, length 300mm, thread length 150mm, galvanized, c/w hex full nut	ES400F1	107735	2



CC 111457

<p>STEELWORK BRACKET PILOT PIN</p>	<p>Change information for this issue N/A</p>	<p>Appears in ES400S11</p>	<p>electricity north west I-400S11-SWK-020 Iss 2 sht 1 of 1 Scale: nts Auth: DMT Date: 27/10/2011</p>
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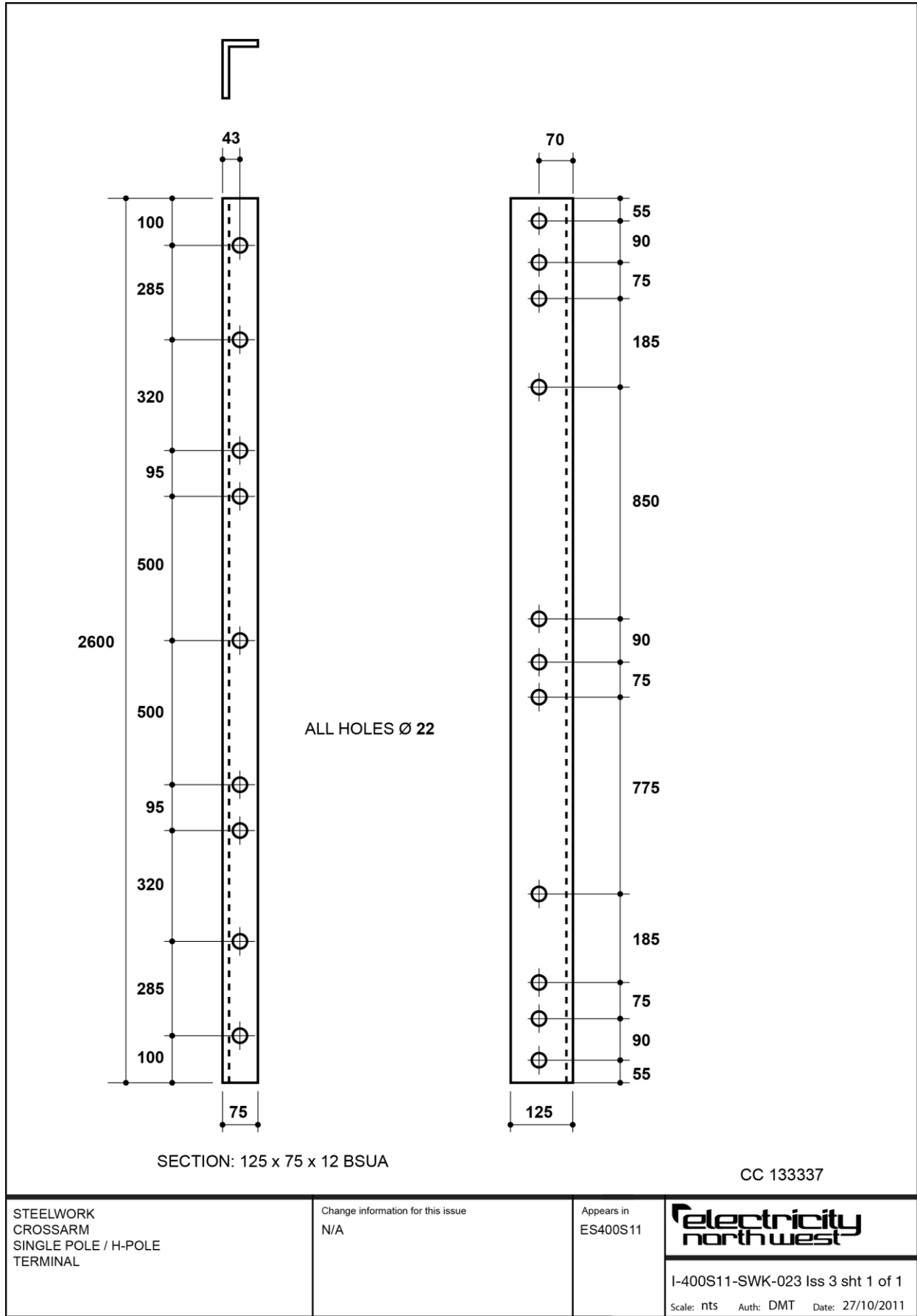


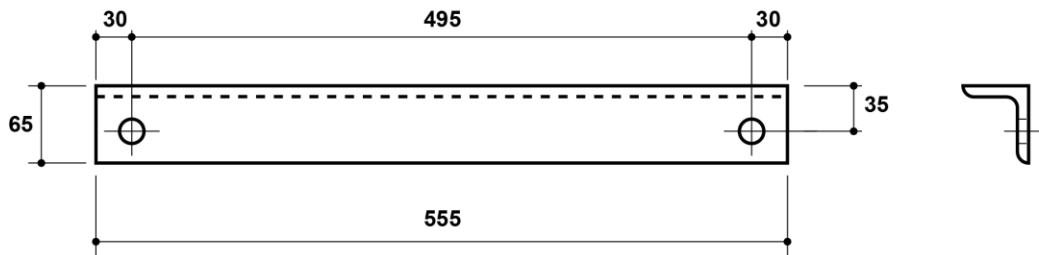
STEELWORKM, CROSSARM
SINGLE POLE
STRAIGHT LINE SECTION / ANGLE
SECTION AND H-POLE ANGLE
SECTION UP TO 60°

Change information for this issue
N/A

Appears in
ES400S11

Electricity north west
I-400S11-SWK-022 Iss 3 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011





2 HOLES 22 DIA

65 x 50 x 8 BSUA

CC 133335

STEELWORK
CROSSARM BRACE
DIAGONAL

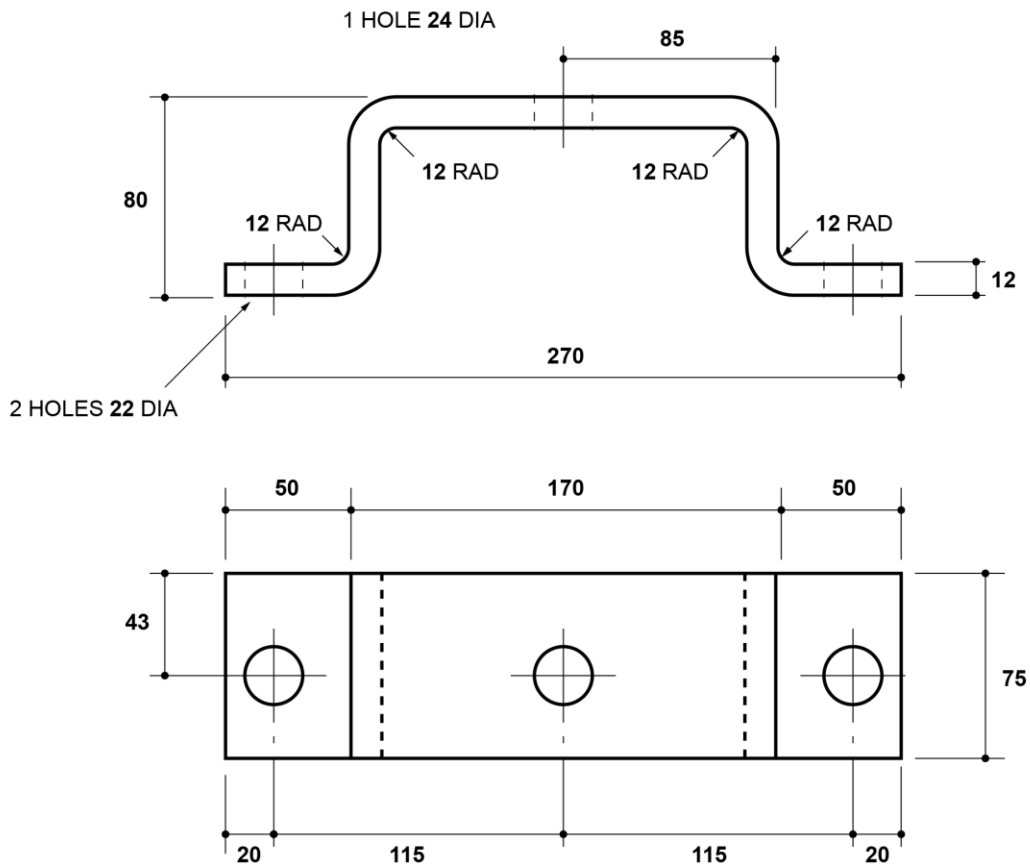
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-024 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



CC 133302

STEELWORK
INSULATOR BRACKET
(TOP HAT)

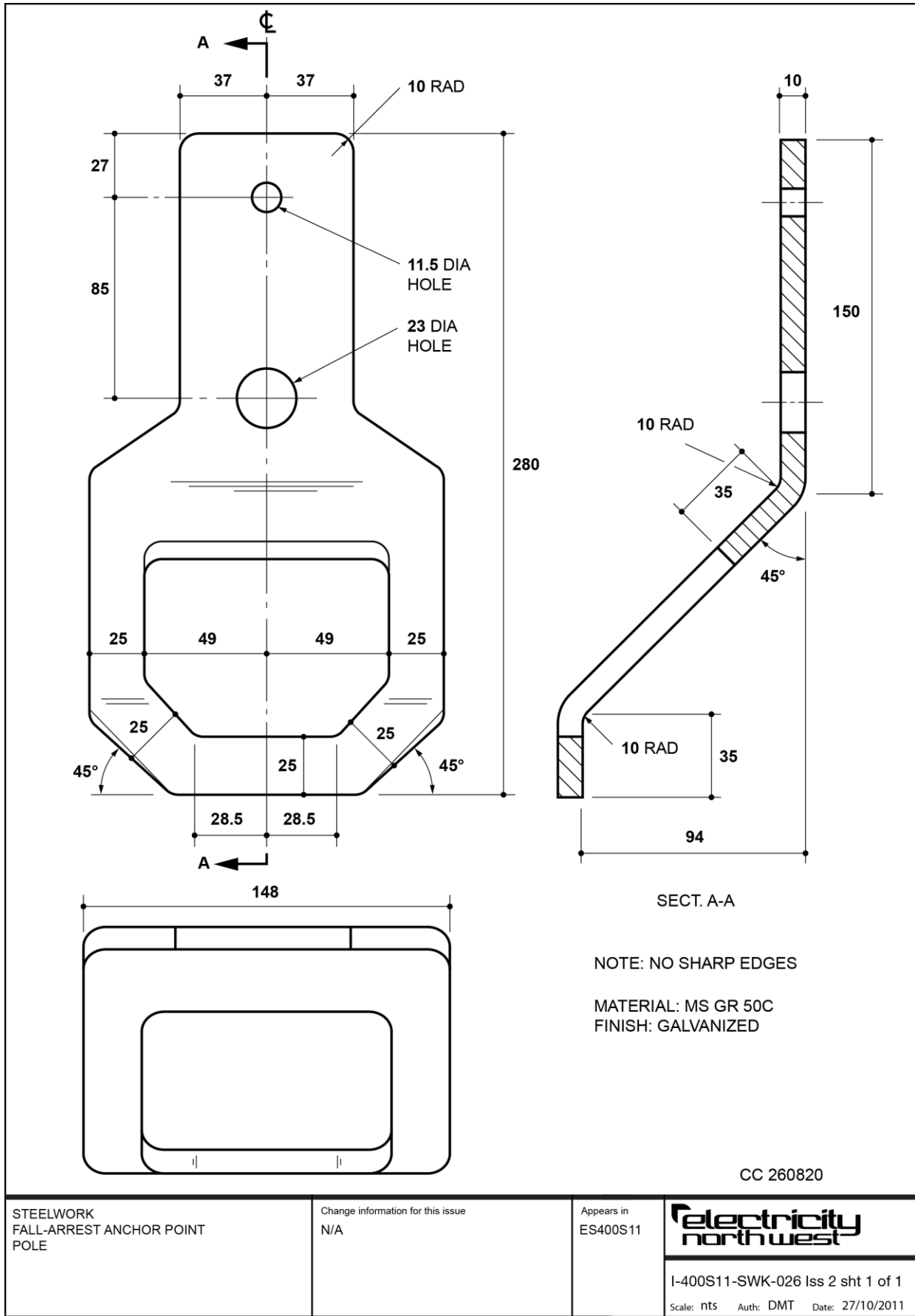
Change information for this issue
N/A

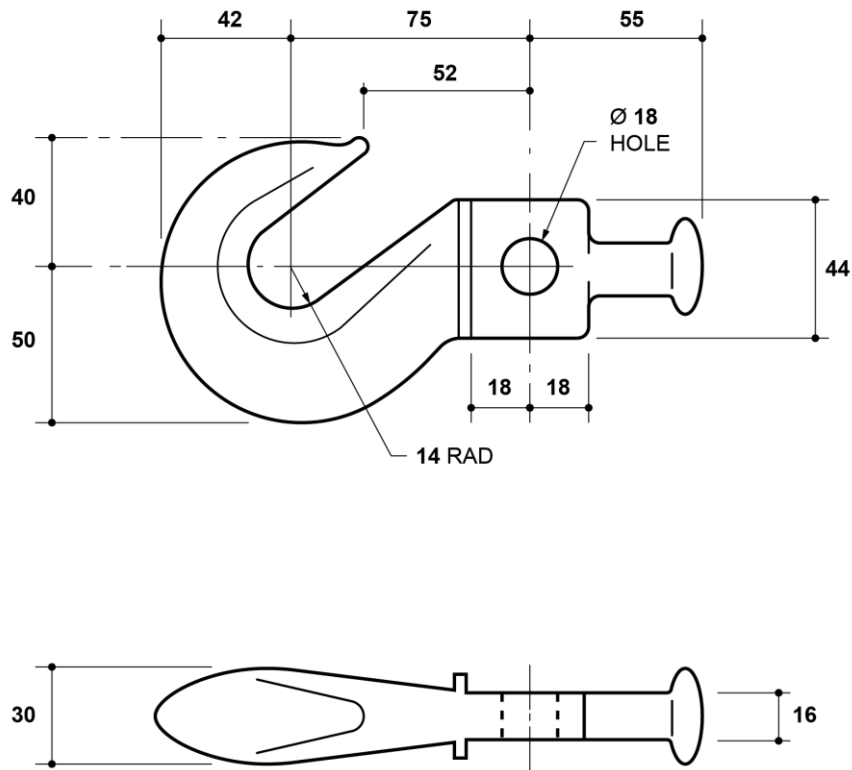
Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-025 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011





CC 122297

STEELWORK
BALL ENDED HOOK
15 / 32

Change information for this issue
N/A

Appears in
ES400S11



I-400S11-SWK-027 Iss 2 sht 1 of 1

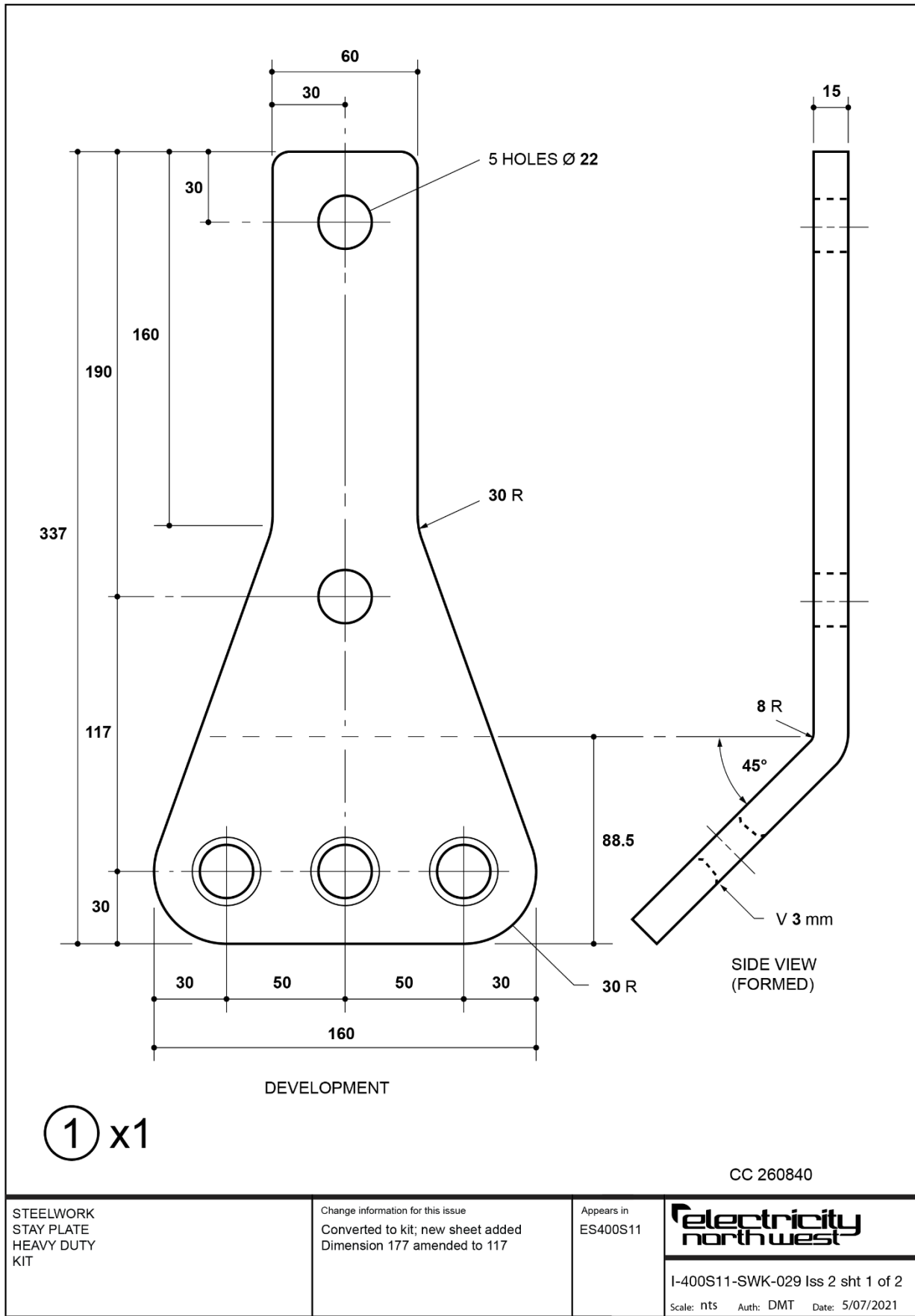
Scale: nts Auth: DMT Date: 27/10/2011

TBA

Reserved for drawing of a new crossarm:

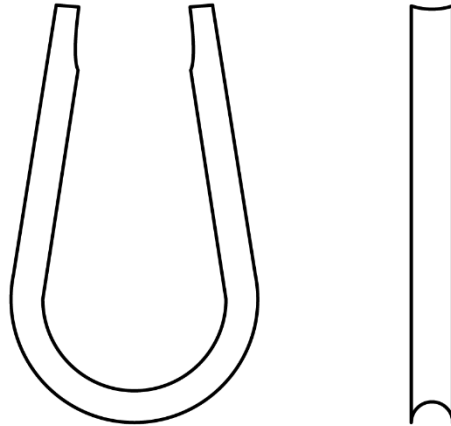
- a) Drawing number: I-400S11-SWK-028-11-1
- b) Drawing title: Steelwork, crossarm, jumper support
- c) CC 133615

(Awaiting as-built sample to check clearance dimensions.)



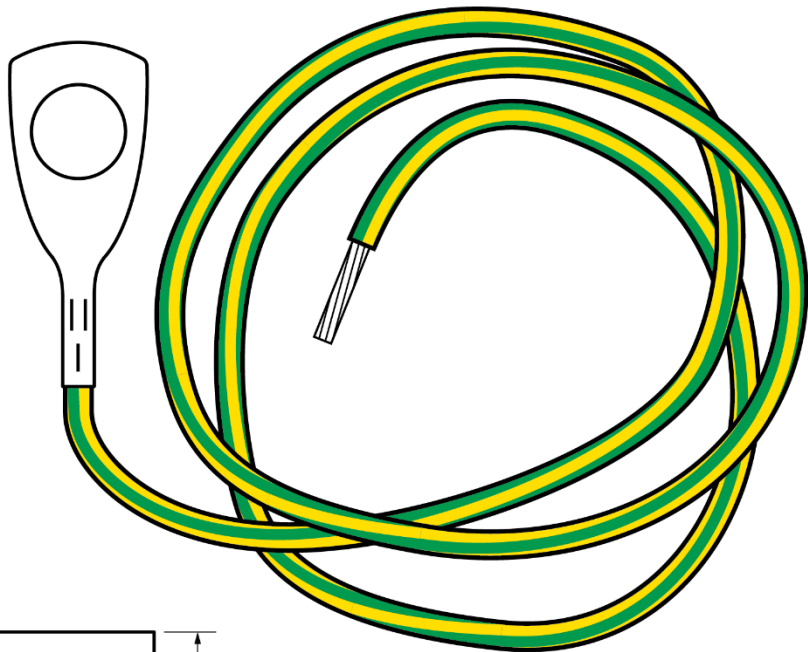
② x2

Open thimble



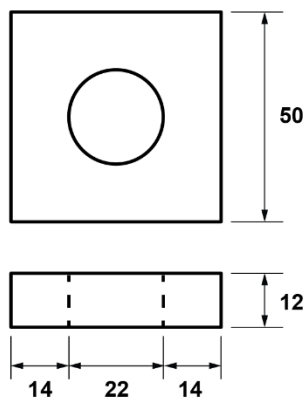
③ x1

Bonding wire



④ x1

Packing washer



CC 260840

STEELWORK
STAY PLATE
HEAVY DUTY
KIT

Change information for this issue
Converted to kit; new sheet added
Dimension 177 amended to 117

Appears in
ES400S11

electricity north west

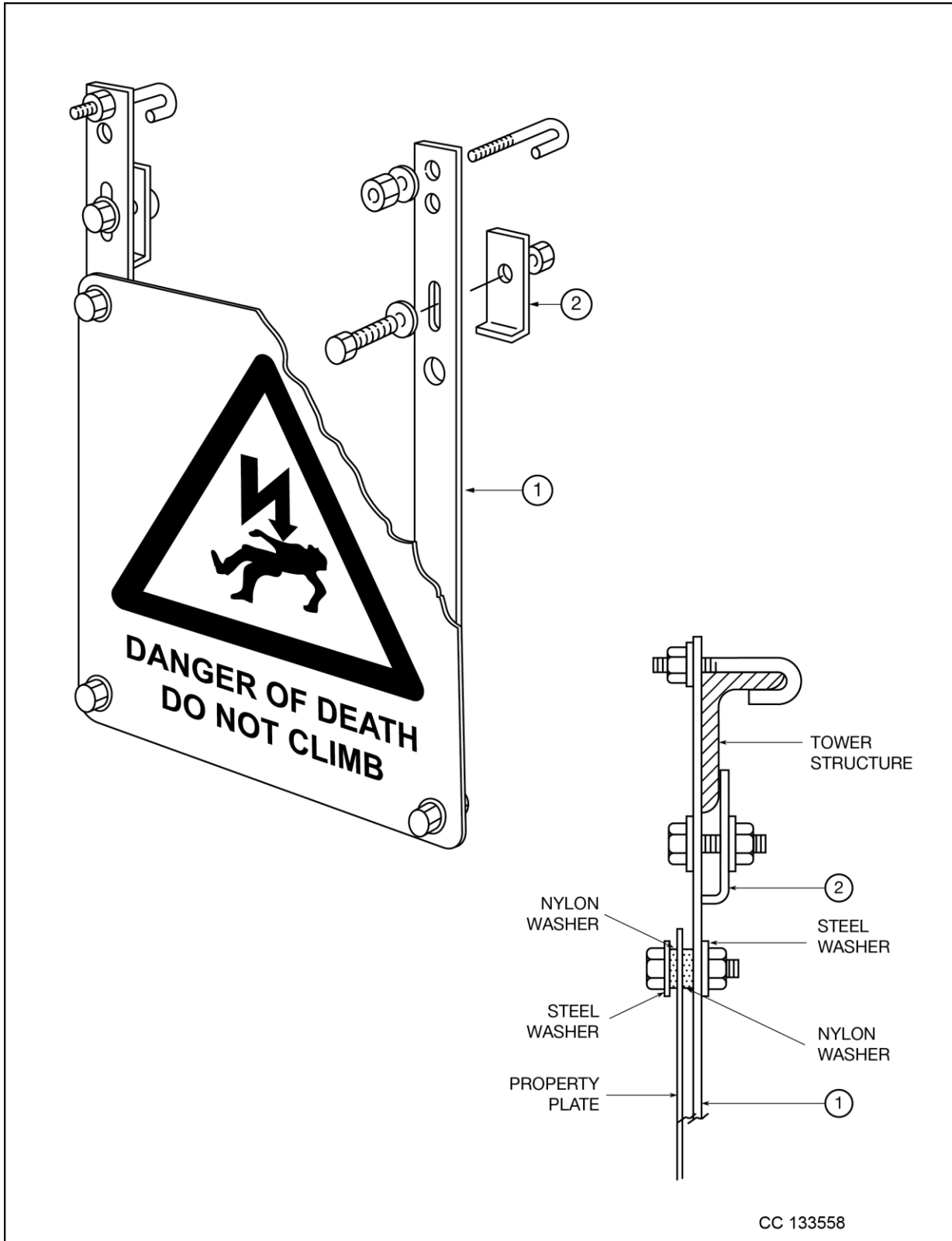
I-400S11-SWK-029 Iss 2 sht 2 of 2

Scale: nts Auth: DMT Date: 5/07/2021

STEELWORK, STAY PLATE, HEAVY DUTY, KIT

03/08/21

Drawing No: I-400S11-SWK-029			
Description	ES Ref No	CC number	Quantity
Steelwork, stay plate, heavy duty (item 1)	ES400S11	-	1
Steelwork, thimble, open-ended, stay (item 2) *	ES400S11	132241	2
Conductor, HDCu, 16mm ² (green/yellow covered) **	ES400C3	-	1.8m long
terminated by a single hole, 22mm dia, lug (item 3) **	ES400C29	-	-
Washer, square, flat, 50x50x12mm, 22mm hole, galvanized mild steel (item 4)	-	-	1
* Refer to Drawing I-400S11-SWK-075.			
** Although this item is not listed in the Electricity Specification referenced, it must meet the requirements of this specification.			



CC 133558

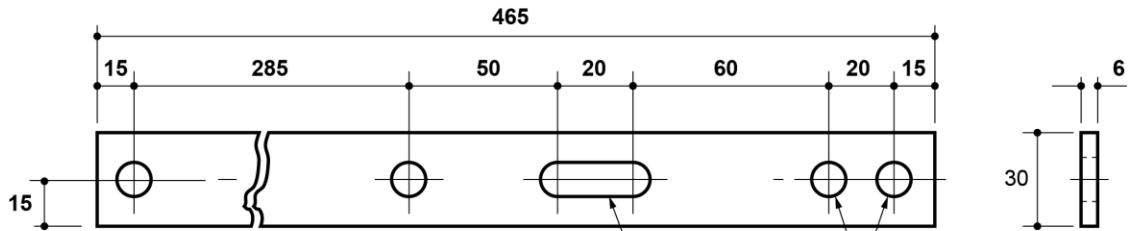
STEELWORK
SAFETY-SIGN FIXING KIT
STEEL TOWERS

Change information for this issue
Fibre washer changed to Nylon washer
in 2 places

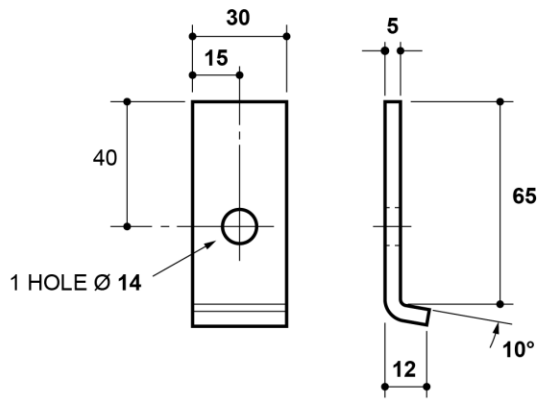
Appears in
ES400S11
CP430 Pt 2



I-400S11-SWK-030 Iss 2 sht 1 of 2
27/10/2011



ITEM ① 2 REQUIRED PER ASSEMBLY 14 WIDE SLOT 4 HOLES Ø 14



ITEM ② 2 REQUIRED PER ASSEMBLY

CC 133558

STEELWORK
SAFETY-SIGN FIXING KIT
STEEL TOWERS

Change information for this issue
Fibre washer changed to Nylon washer
in 2 places

Appears in
ES400S11
CP430 Pt 2

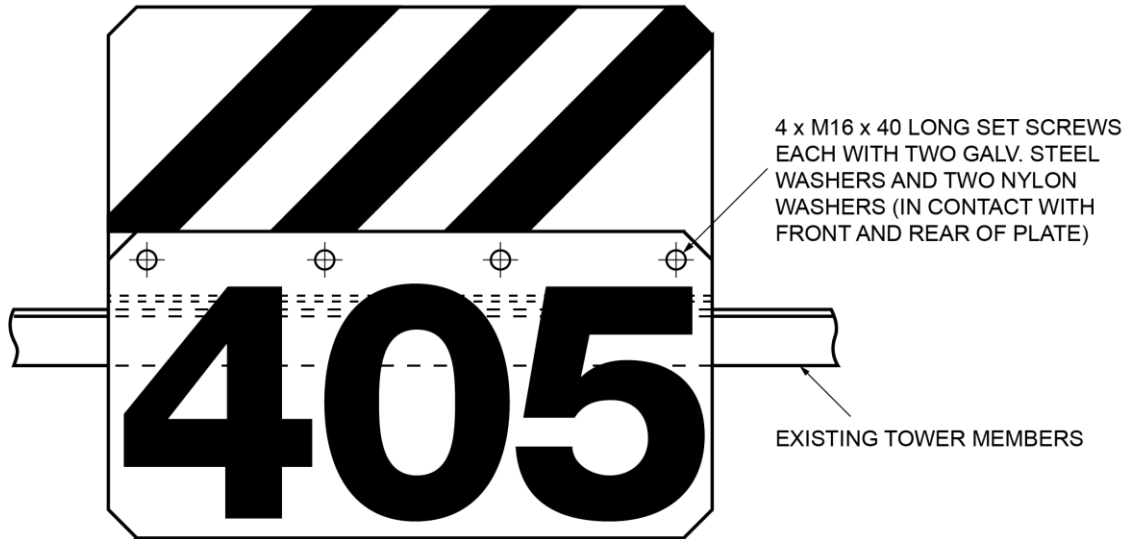


I-400S11-SWK-030 Iss 2 sht 2 of 2
27/10/2011

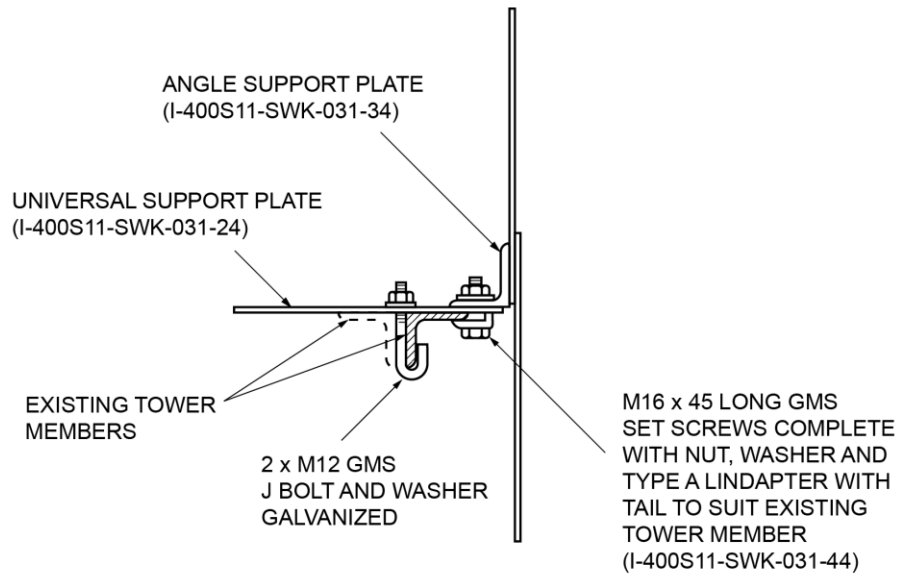
STEELWORK, SAFETY-SIGN FIXING KIT, STEEL TOWERS

Drawing No: I-400S11-SWK-030			
Description	ES Ref No	CC number	Quantity
Steelwork, angle bracket, safety-sign fixing kit * (Dwg I-400S11-SWK-030, item (2))	ES400S11	133570	2
Bolt, M12, length 35mm, thread length 35mm, galvanized, c/w hex full nut	ES400F1	-	6
Bolt, J, M12, length 130mm, thread length 95mm, galvanized, c/w hex full nut	ES400F1	-	2
Steelwork, strap, safety-sign fixing kit * (Dwg I-400S11-SWK-030, item (1))	ES400S11	-	2
Washer, round, flat, 14mm hole, outer dia 24mm, thickness 2.5mm, galvanized	ES400F1	-	14
The fibre washers shown on the drawing are not part of this kit; they are supplied with the Danger of Death notice.			

* Materials shall be to BS EN 10025 grade FE430A or equivalent and galvanized to BS EN ISO 1461 or equivalent. Galvanized steelwork shall be free from sharp edges or points left by the galvanization process.



GENERAL ARRANGEMENT



KIT CC 122820

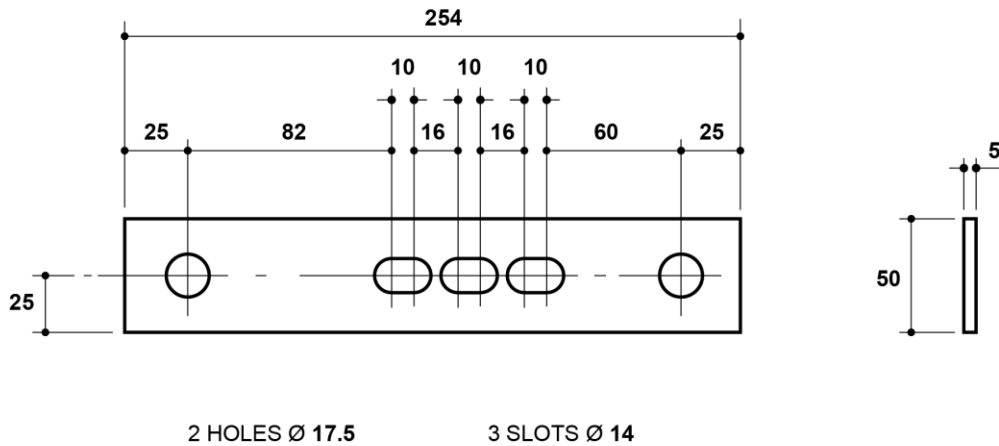
STEELWORK
HELICOPTER-REFERENCE FIXING KIT
STEEL TOWERS

Change information for this issue
J bolt changed from M10 to M12.
Hole diameters in universal support
plate changed accordingly.

Appears in
ES400S11
CP430 Pt 2

electricity north west

I-400S11-SWK-031 Iss 3 sht 1 of 4
Scale: nts Auth: DMT 29/2/2016



UNIVERSAL SUPPORT PLATE
2 REQUIRED PER ASSEMBLY

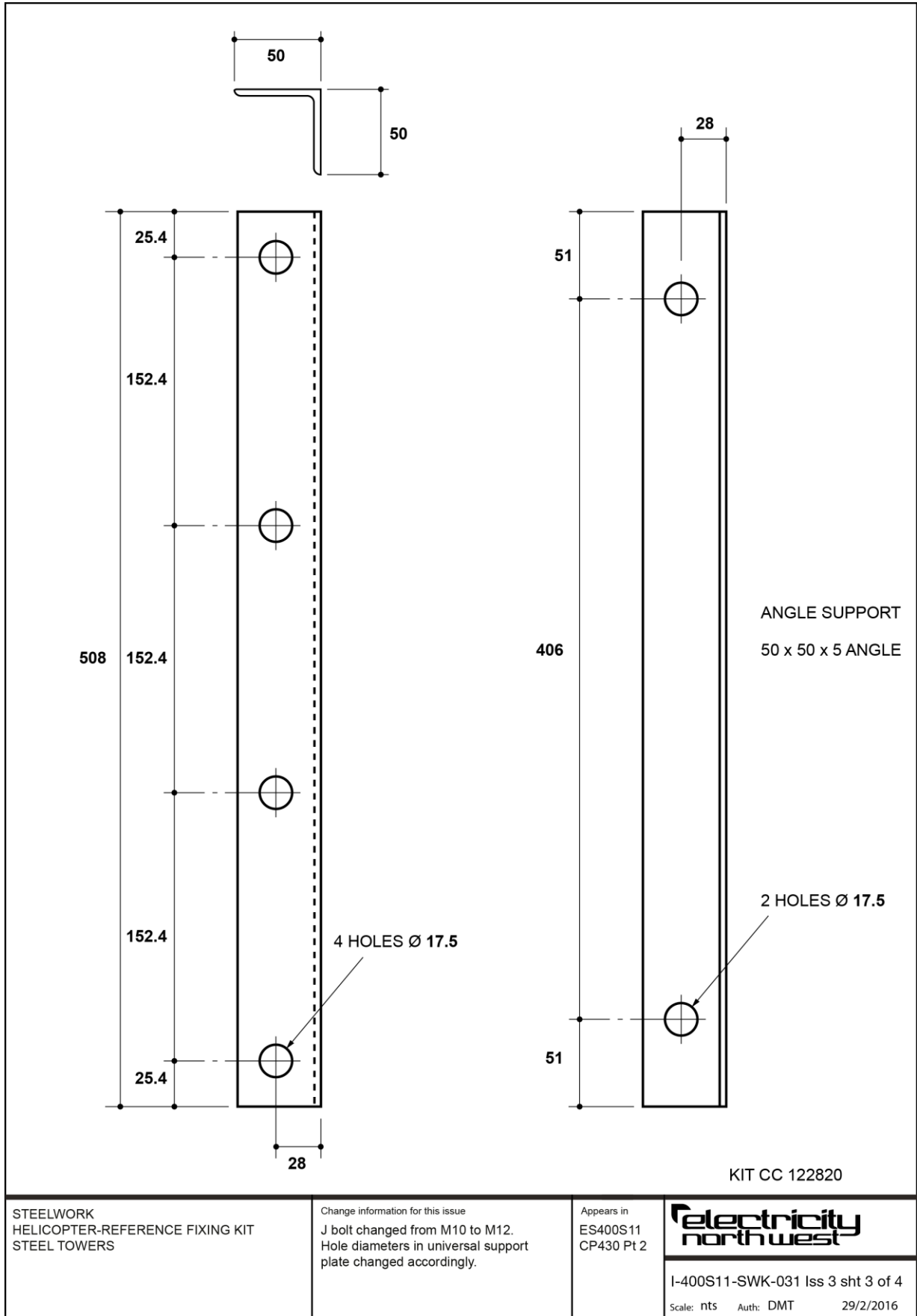
254 x 5 THK PLATE

KIT CC 122820

STEELWORK
HELICOPTER-REFERENCE FIXING KIT
STEEL TOWERS

Change information for this issue
J bolt changed from M10 to M12.
Hole diameters in universal support
plate changed accordingly.

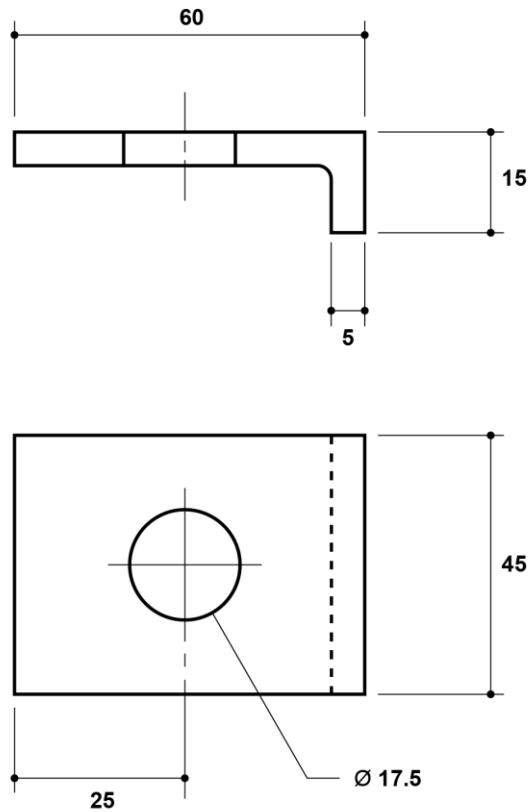
Appears in
ES400S11
CP430 Pt 2



STEELWORK
HELICOPTER-REFERENCE FIXING KIT
STEEL TOWERS

Change information for this issue
J bolt changed from M10 to M12.
Hole diameters in universal support
plate changed accordingly.

Appears in
ES400S11
CP430 Pt 2



FIXING CLIP

MATERIAL: GMS

KIT CC 122820

STEELWORK
HELICOPTER-REFERENCE FIXING KIT
STEEL TOWERS

Change information for this issue
J bolt changed from M10 to M12.
Hole diameters in universal support
plate changed accordingly.

Appears in
ES400S11
CP430 Pt 2

**electricity
north west**

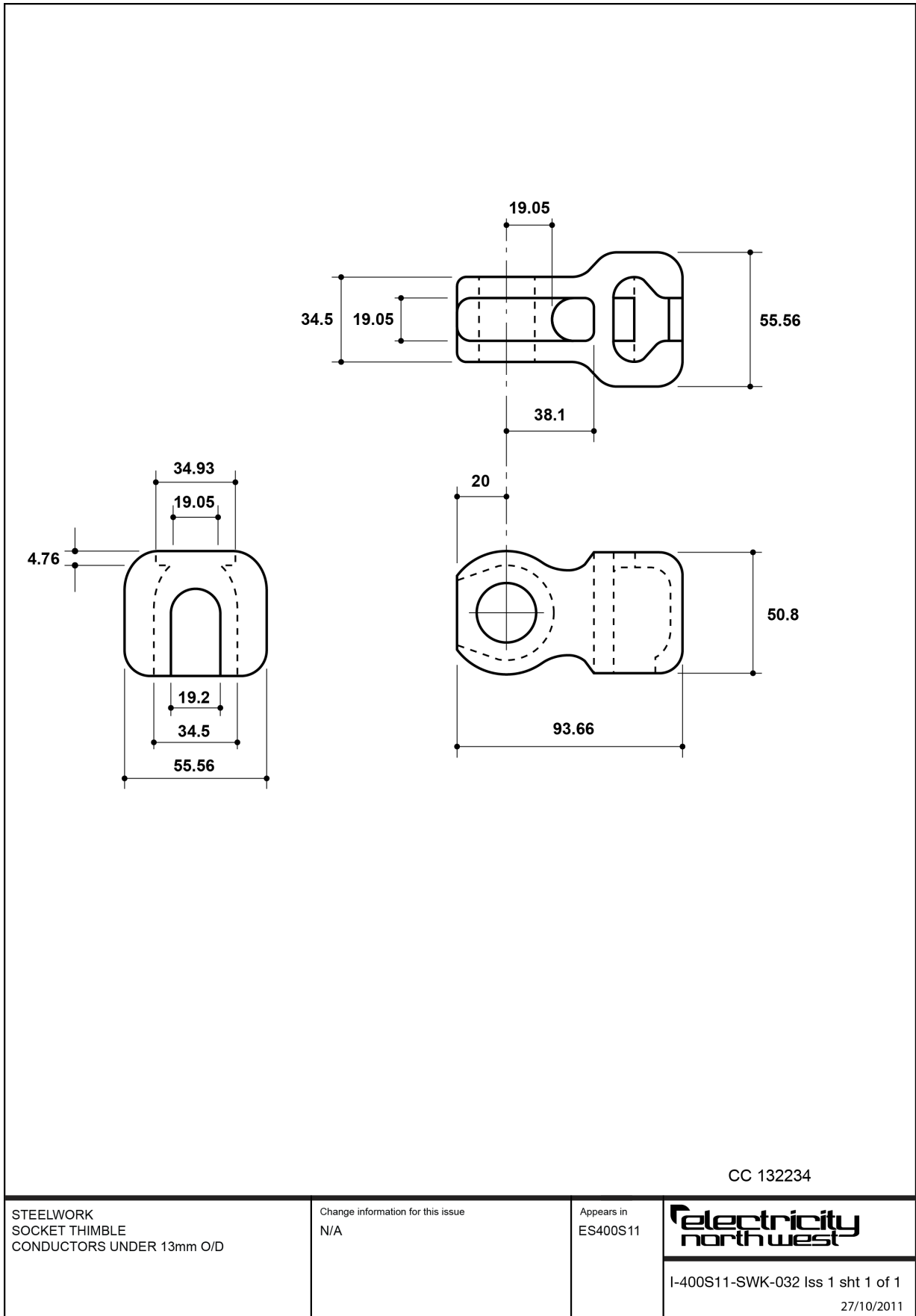
I-400S11-SWK-031 Iss 3 sht 4 of 4

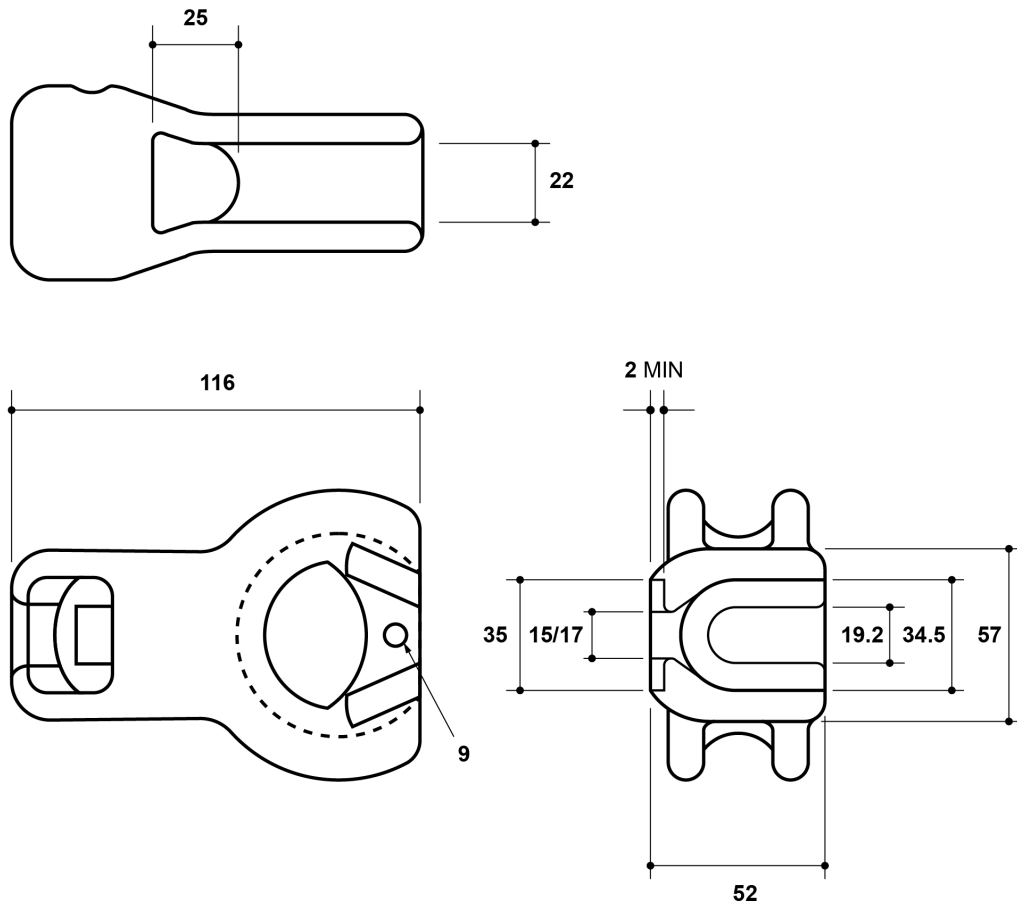
Scale: nts Auth: DMT 29/2/2016

STEELWORK, HELICOPTER-REFERENCE FIXING KIT, STEEL TOWERS

Drawing No: I-400S11-SWK-031			
Description	ES Ref No	CC number	Quantity
Universal support plate * (Dwg I-400S11-SWK-031-24)	ES400S11	-	2
Angle support plate * (Dwg I-400S11-SWK-031-34)	ES400S11	-	1
Fixing clip (Dwg I-400S11-SWK-031-44)	ES400S11	-	2
Bolt, M16, length 45mm, thread length 45mm, galvanized, c/w hex full nut	ES400F1	-	6
Bolt, J, M12, length 130mm, thread length 95mm, galvanized, c/w hex full nut	ES400F1	-	2
Washer, round, flat, 13mm hole, galvanized	ES400F1	139467	2
Washer, round, flat, 18mm hole, outer dia 30mm, thickness 3mm, galvanized	ES400F1	992992	10
The nylon washers referred to from the drawing are not part of this kit; they are supplied with the notice.			

* Materials shall be to BS EN 10025 grade FE430A or equivalent and galvanized to BS EN ISO 1461 or equivalent. Galvanized steelwork shall be free from sharp edges or points left by the galvanization process.





CC 132233

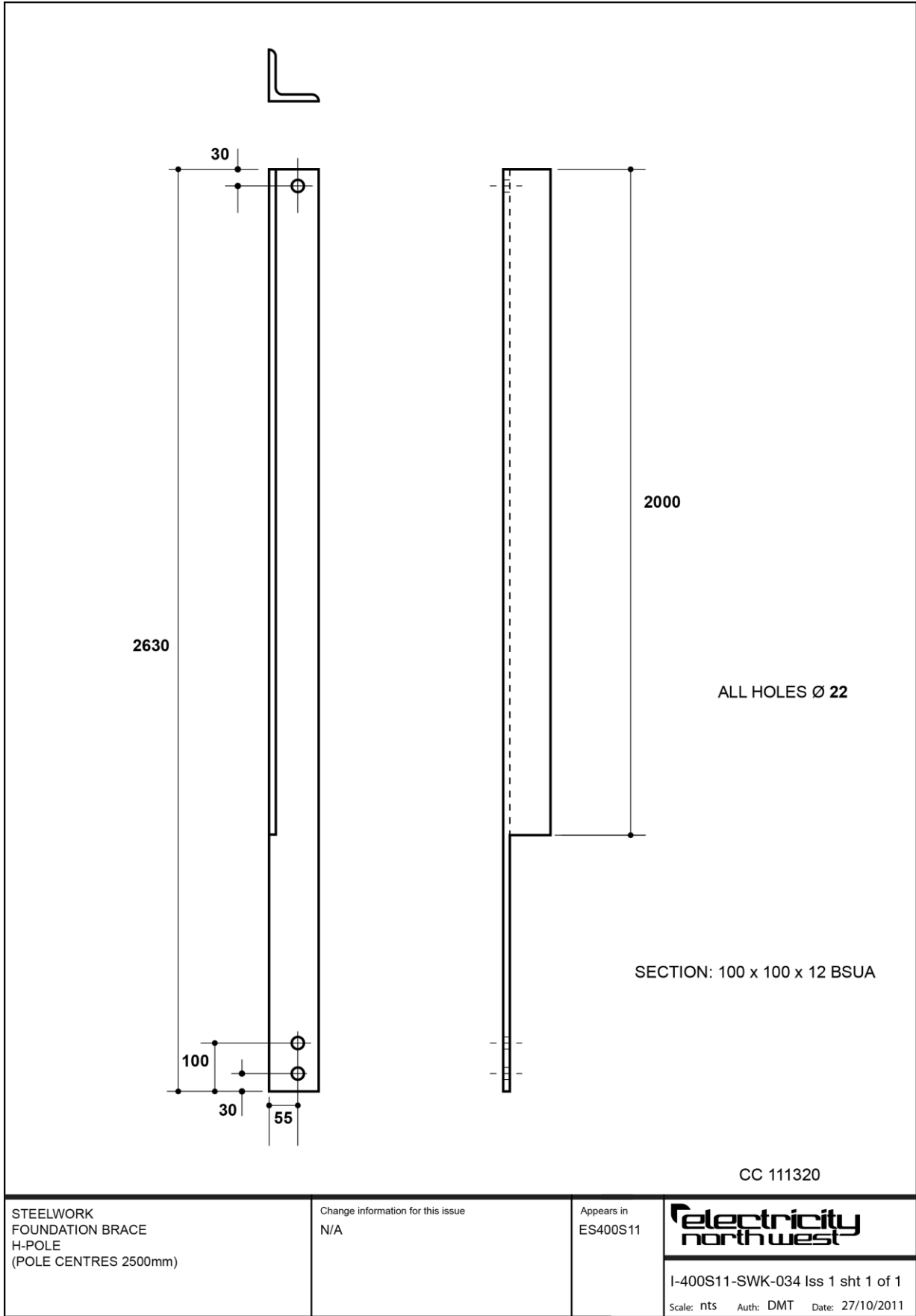
STEELWORK
SOCKET THIMBLE
CONDUCTORS OVER 13mm
OUTER DIAMETER

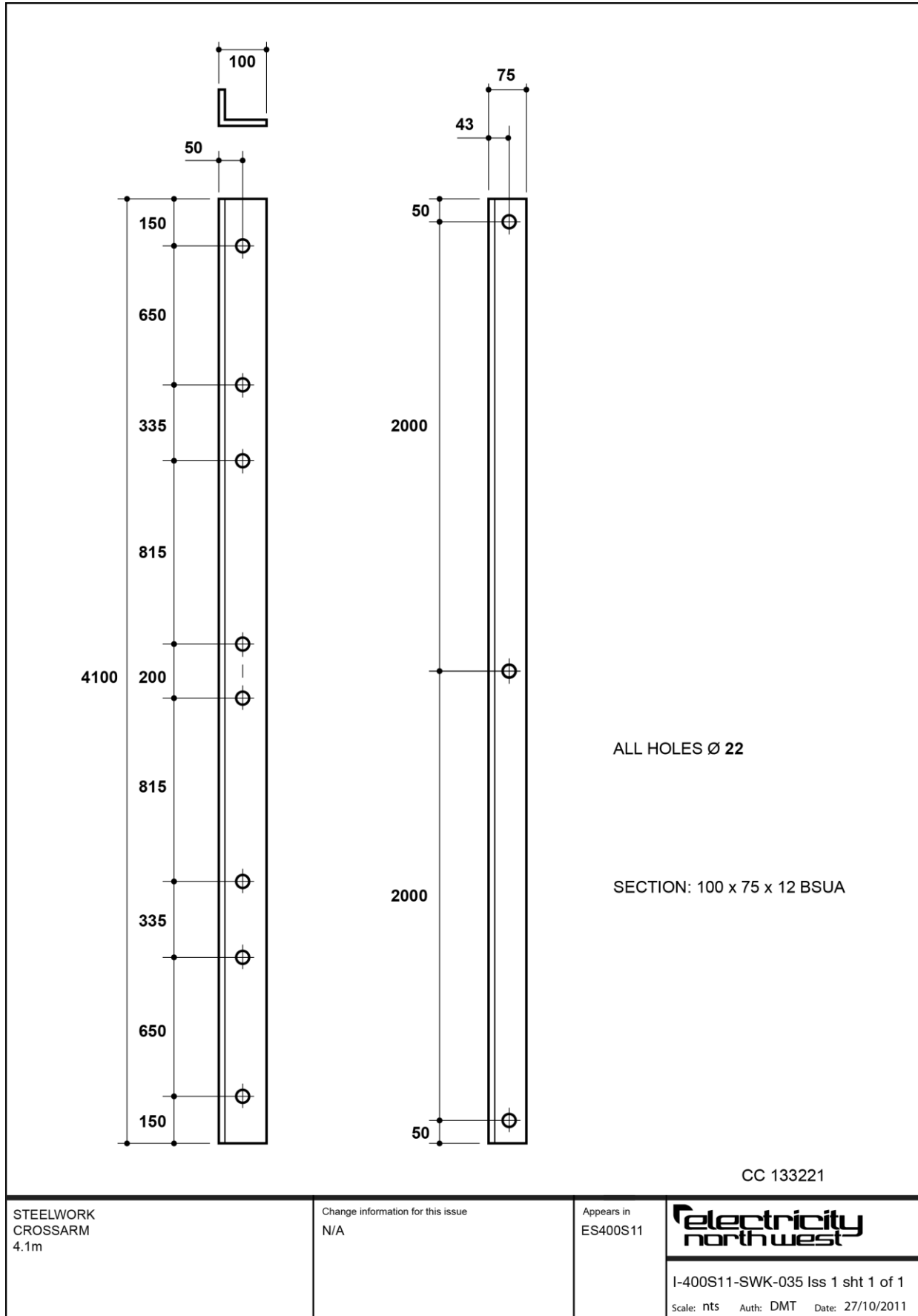
Change information for this issue
N/A

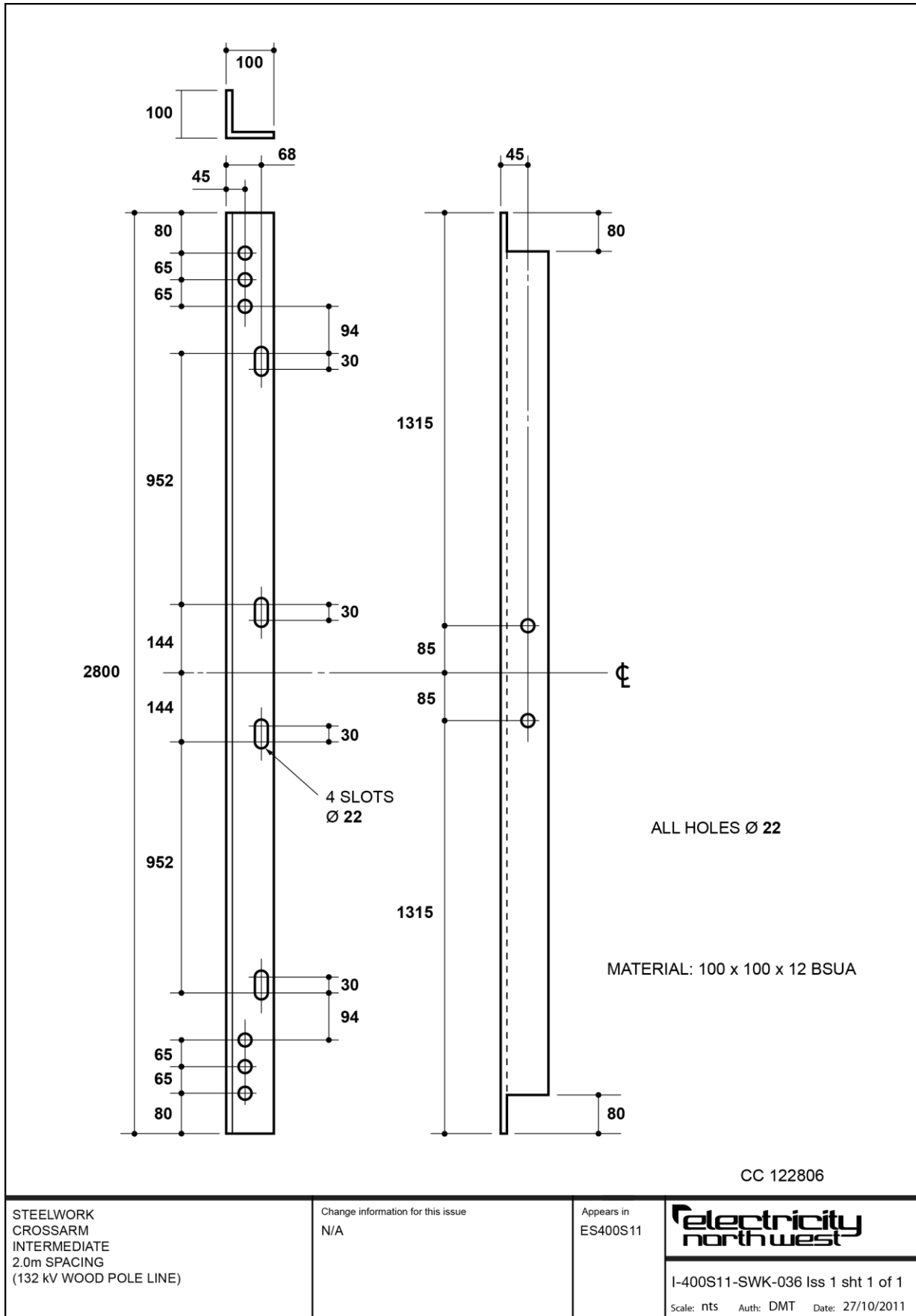
Appears in
ES400S11

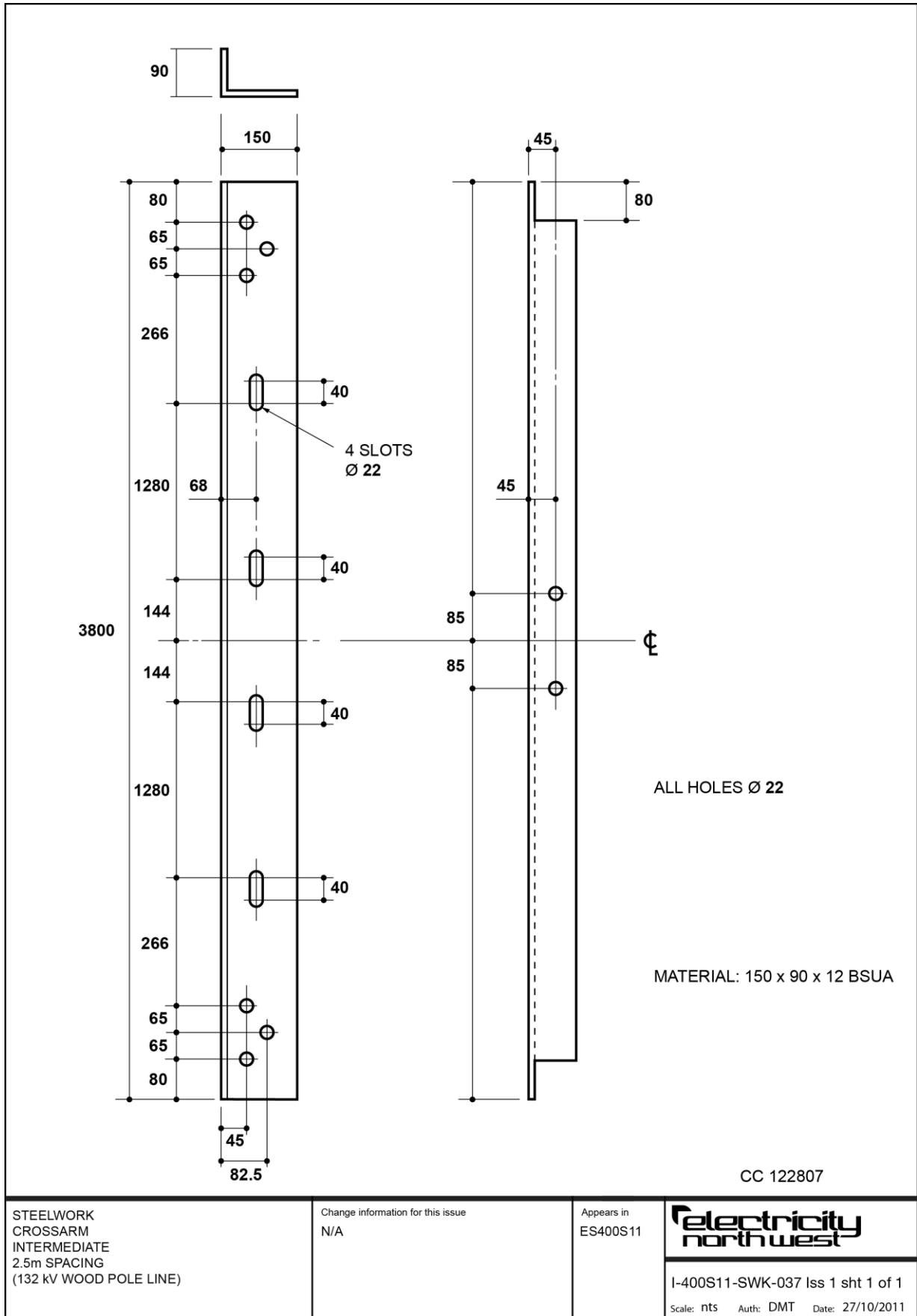
electricity north west

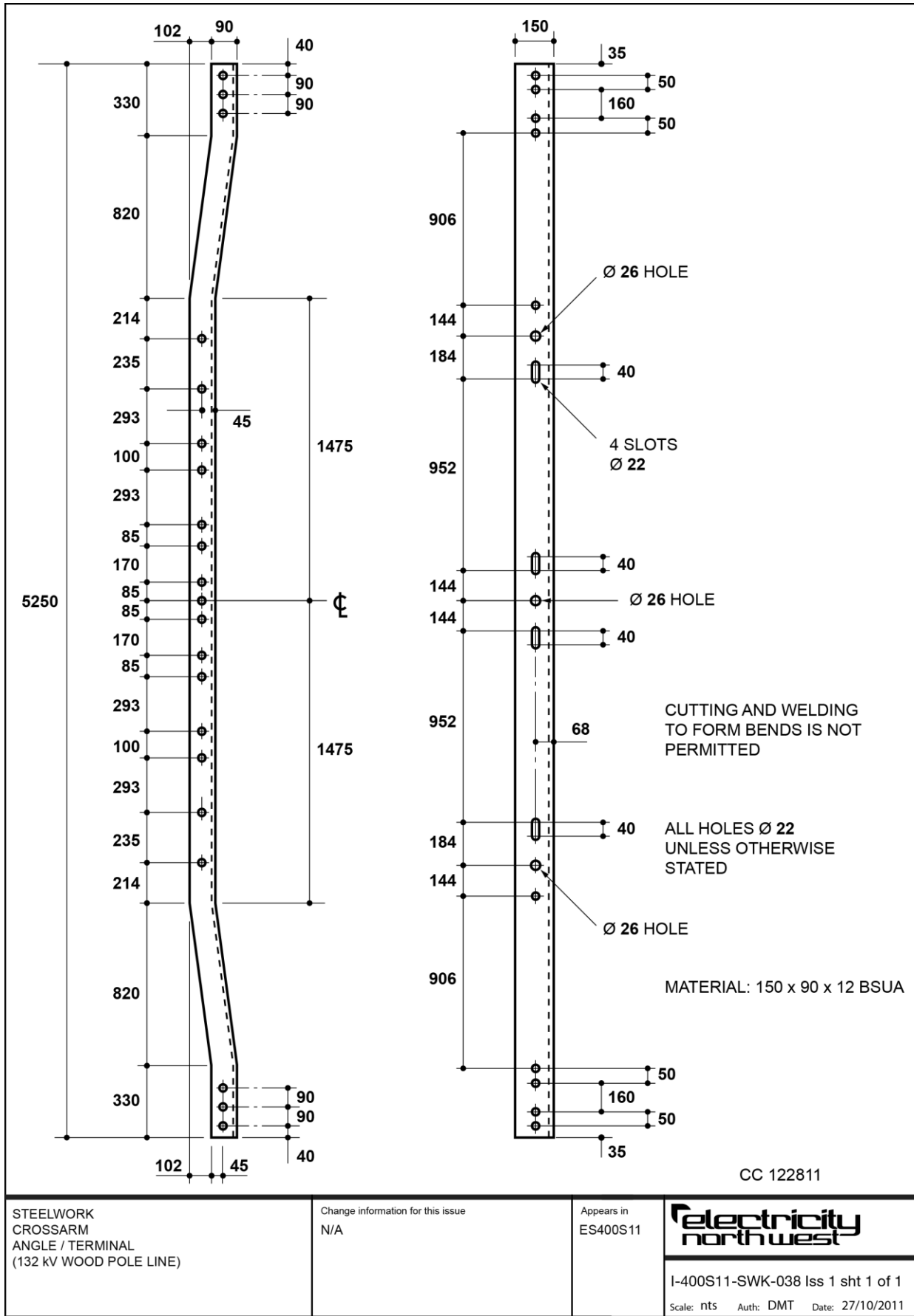
I-400S11-SWK-033 Iss 1 sht 1 of 1
27/10/2011

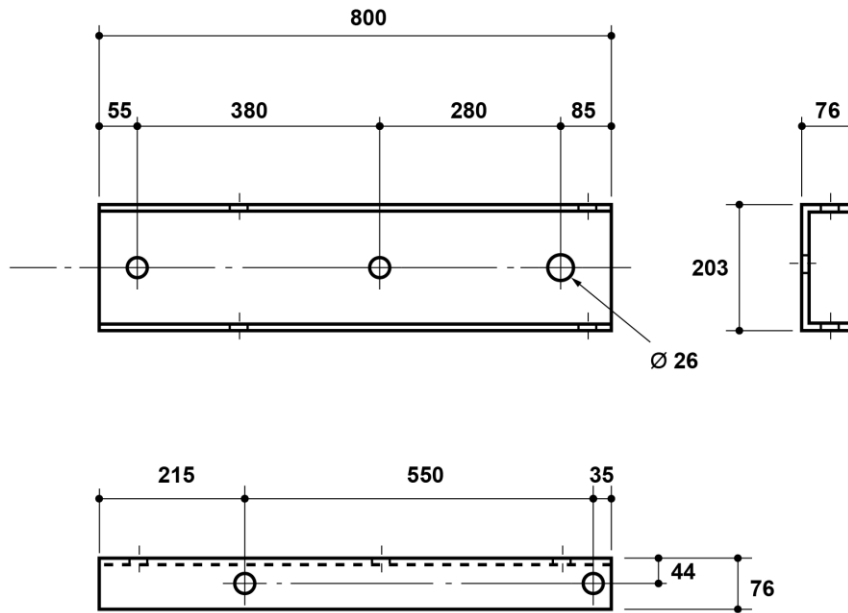












ALL HOLES Ø 22
UNLESS OTHERWISE
STATED

MATERIAL:
203 x 76 (23.8 kg/m) CHANNEL TO BS 4 PART 1

CC 122814

STEELWORK
CROSSARM SUPPORT CHANNEL
(132 kV WOOD POLE LINE)

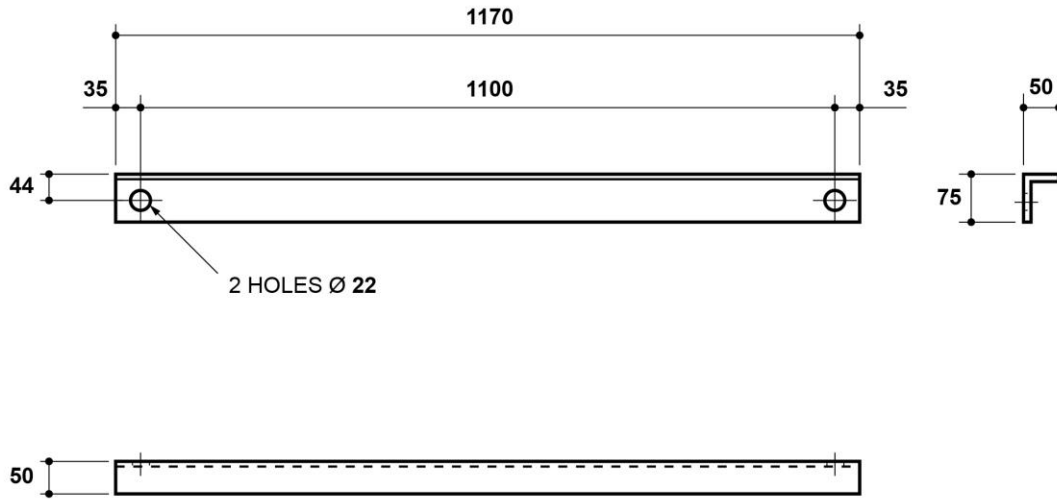
Change information for this issue
N/A

Appears in
ES400S11

Electricity north west

I-400S11-SWK-039 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



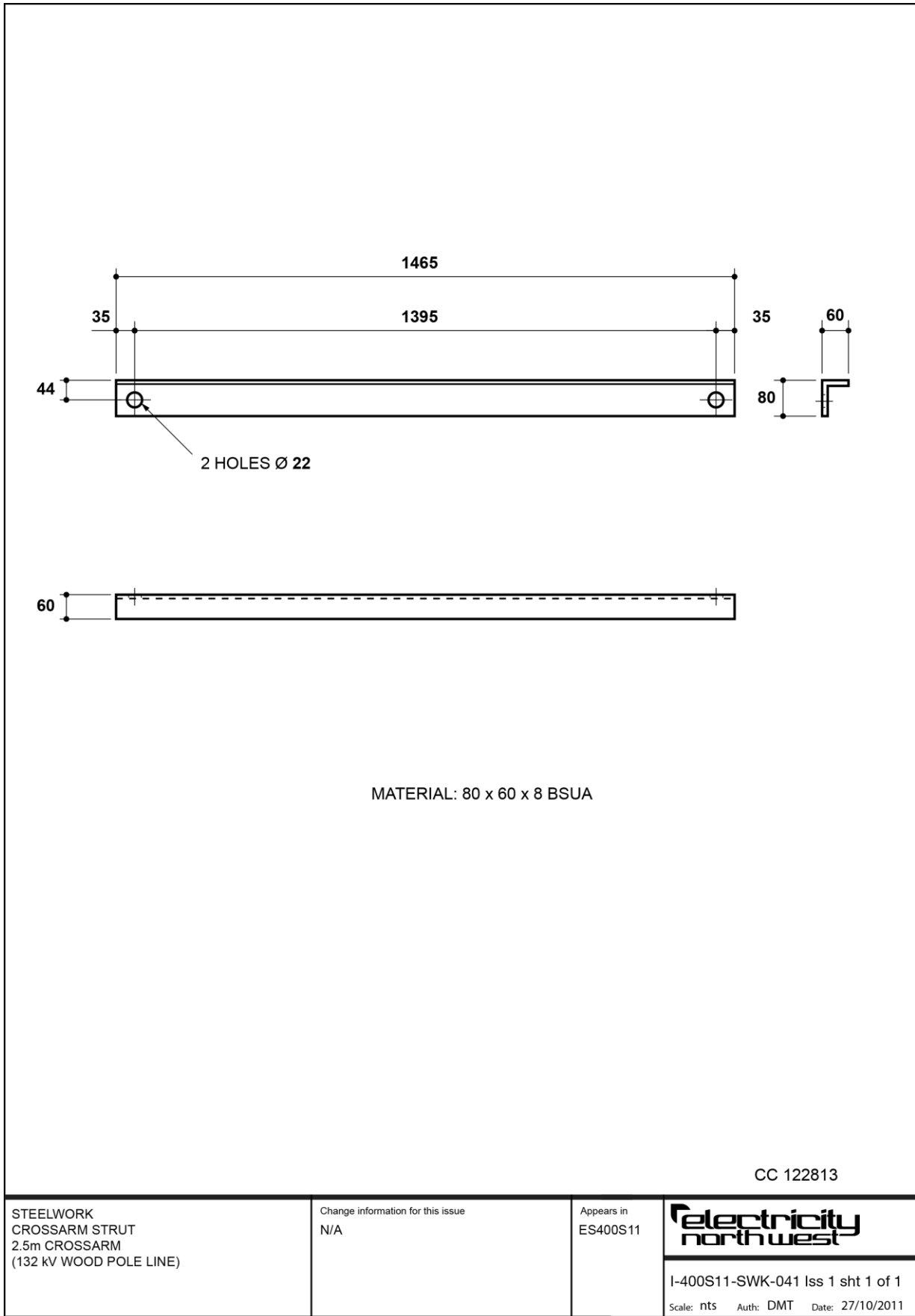
MATERIAL: 75 x 50 x 8 BSUA

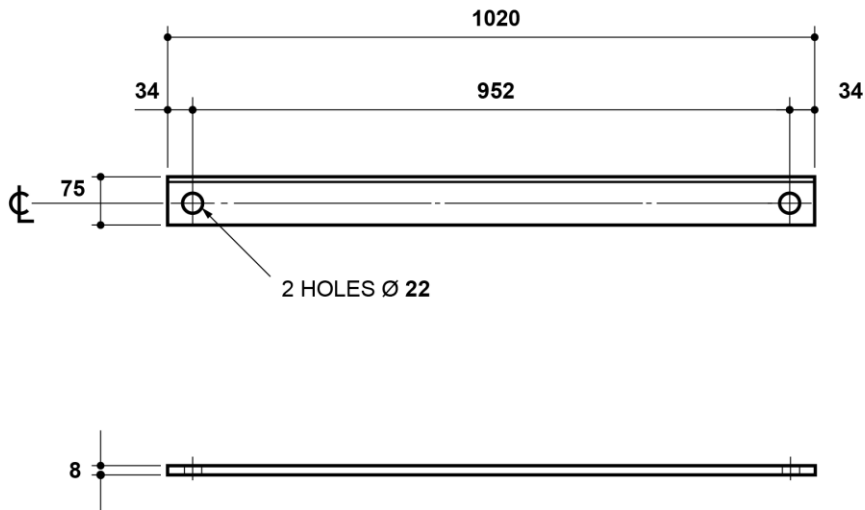
CC 122812

STEELWORK
CROSSARM STRUT
2.0m CROSSARM
(132 kV WOOD POLE LINE)

Change information for this issue
N/A

Appears in
ES400S11





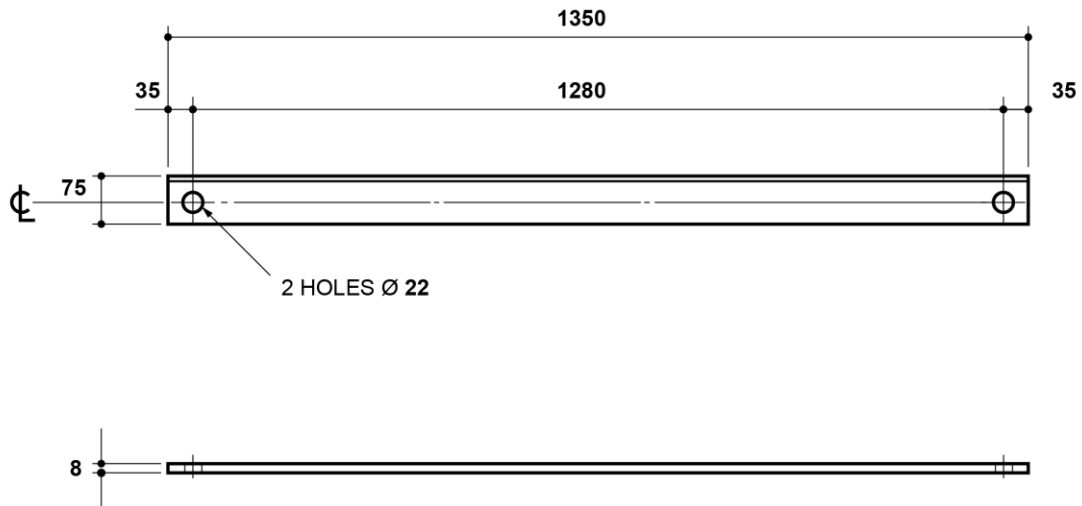
MATERIAL: 75 x 8 STEEL FLAT

CC 122815

STEELWORK
CROSSARM TIE STRAP
2.0m CROSSARM
(132 kV WOOD POLE LINE)

Change information for this issue
N/A

Appears in
ES400S11



MATERIAL: 75 x 8 STEEL FLAT

CC 122816

STEELWORK
CROSSARM TIE STRAP
2.5m CROSSARM
(132 kV WOOD POLE LINE)

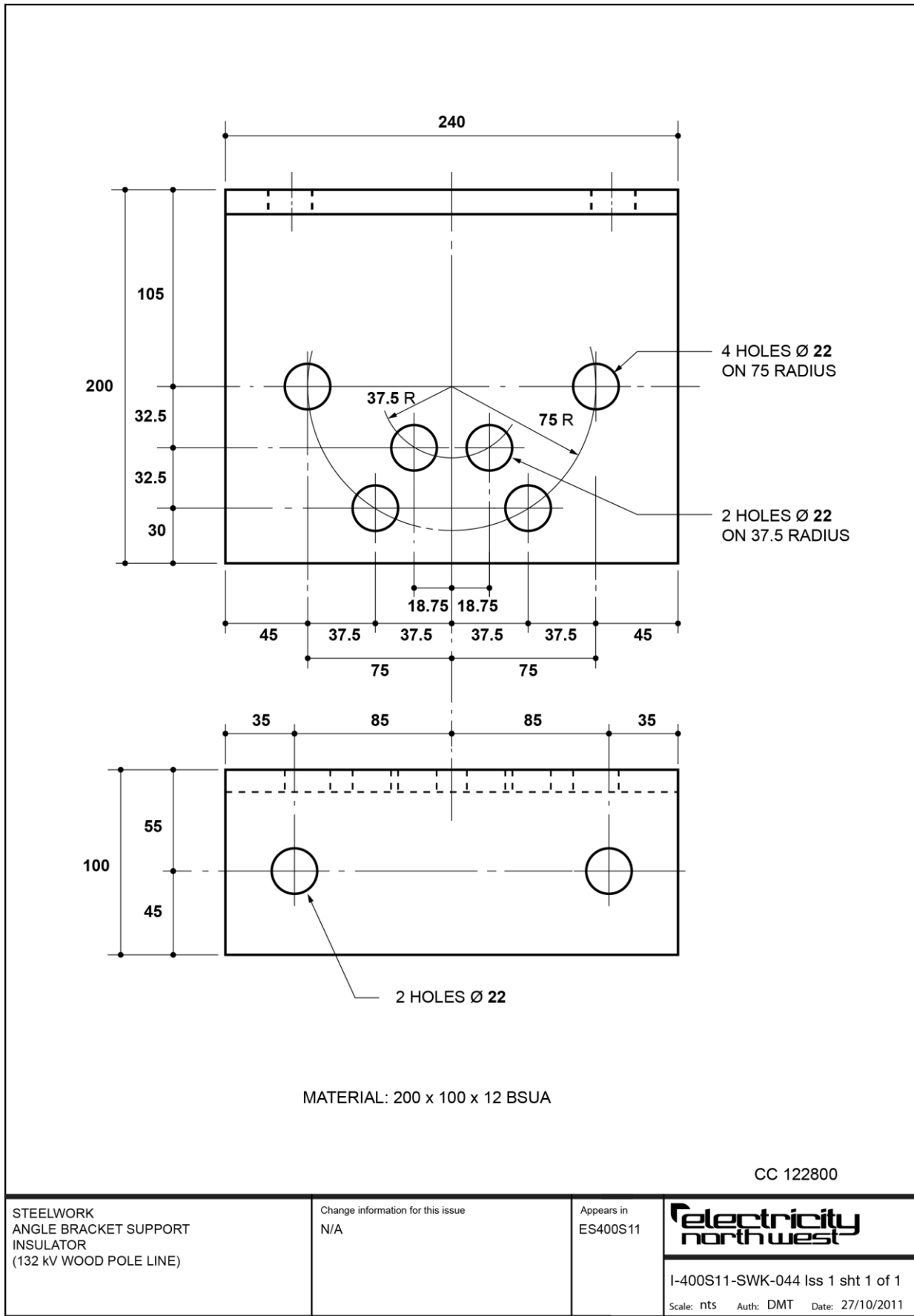
Change information for this issue
N/A

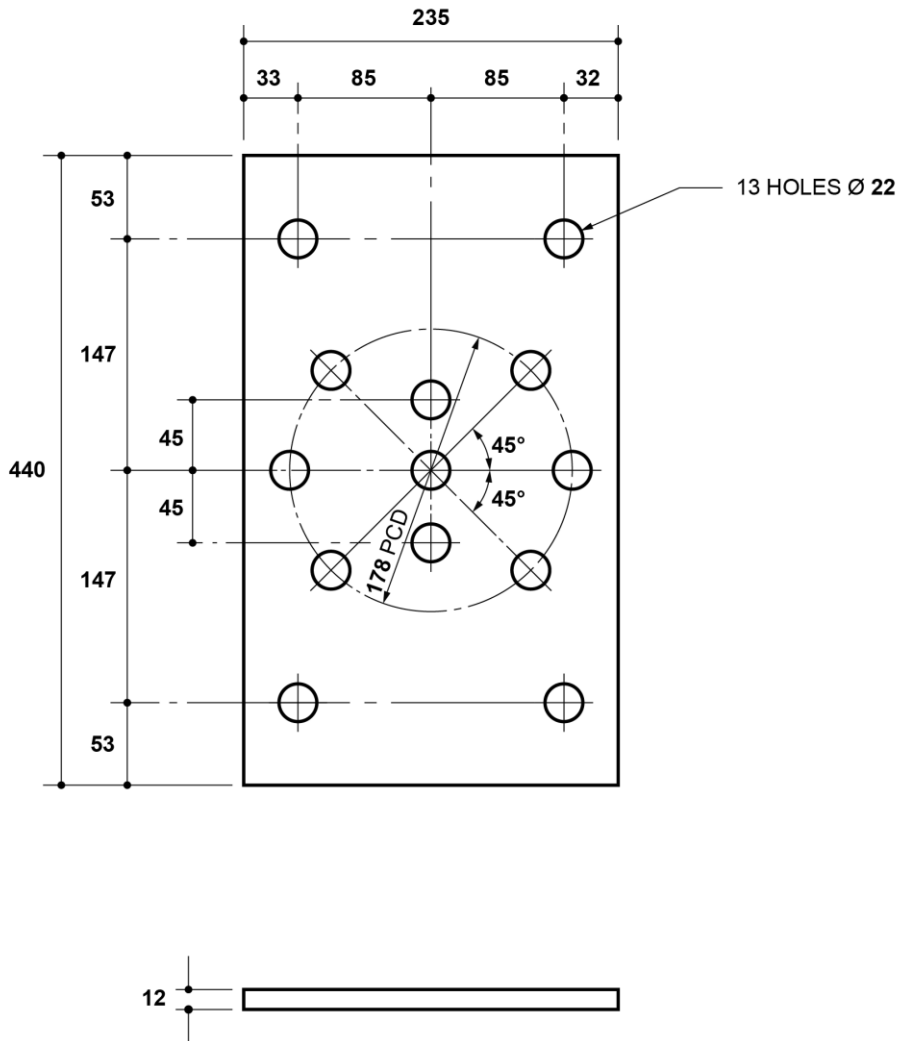
Appears in
ES400S11

electricity north west

I-400S11-SWK-043 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011





MATERIAL: 12 THICK STEEL FLAT

CC 122822

STEELWORK
MOUNTING PLATE
INSULATOR
(132 kV WOOD POLE LINE)

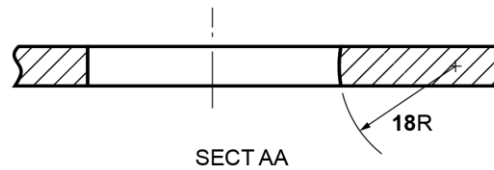
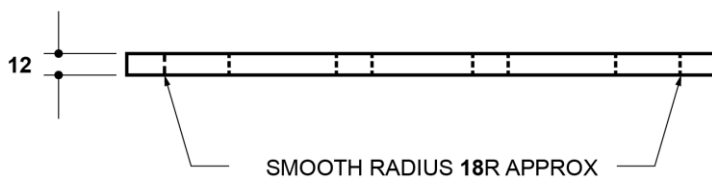
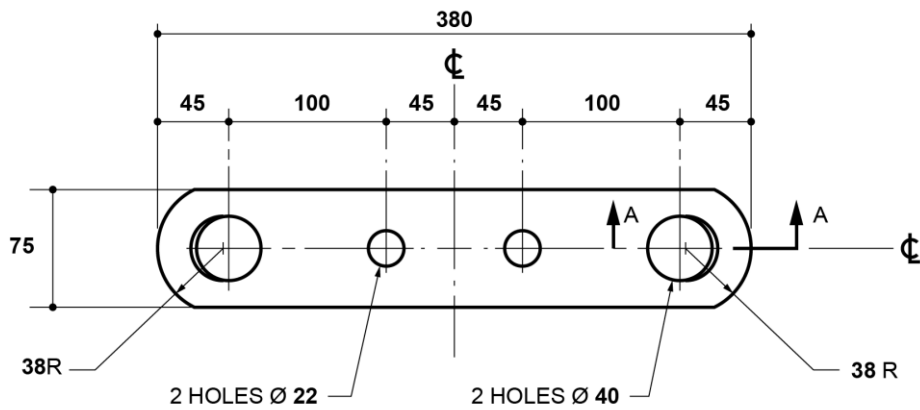
Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-045 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL: 12 THICK STEEL FLAT

CC 122824

STEELWORK
SECTION STRAP
SHORT TYPE
(132 KV WOOD POLE LINE)

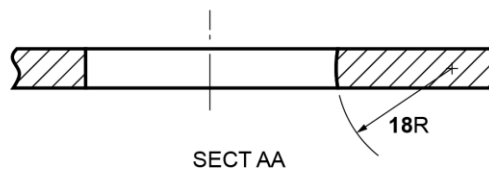
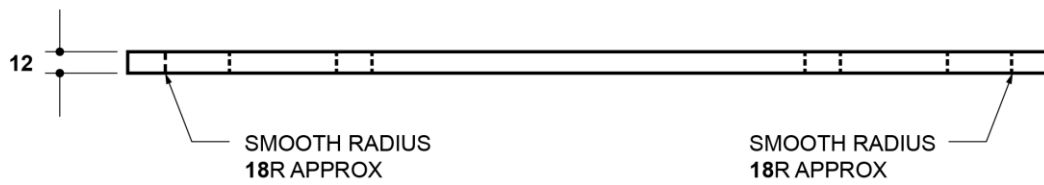
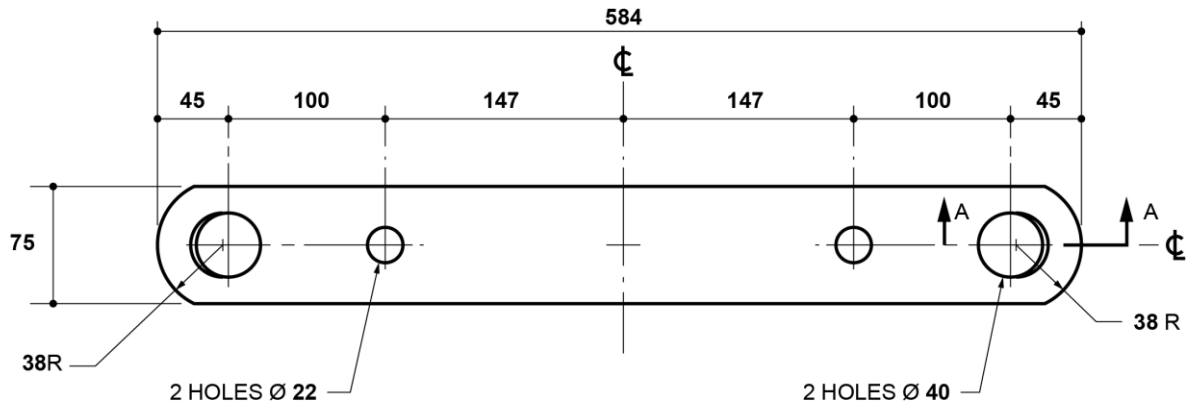
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-046 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL: 12 THICK STEEL FLAT

CC 122825

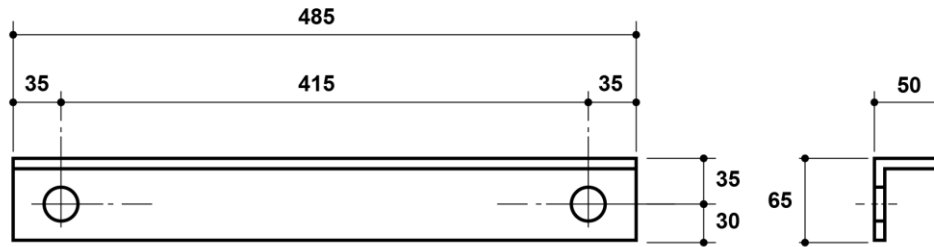
STEELWORK
SECTION STRAP
LONG TYPE
(132 KV WOOD POLE LINE)

Change information for this issue
N/A

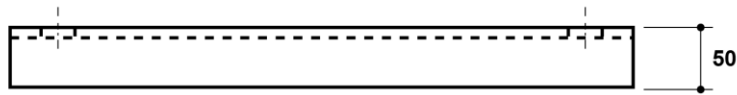
Appears in
ES400S11



I-400S11-SWK-047 Iss 1 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011



2 HOLES Ø 22



MATERIAL: 65 x 50 x 8 BSUA

CC 122809

STEELWORK
CROSSARM BRACE
DIAGONAL
(132 kV WOOD POLE LINE)

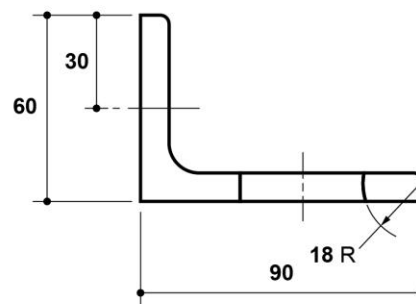
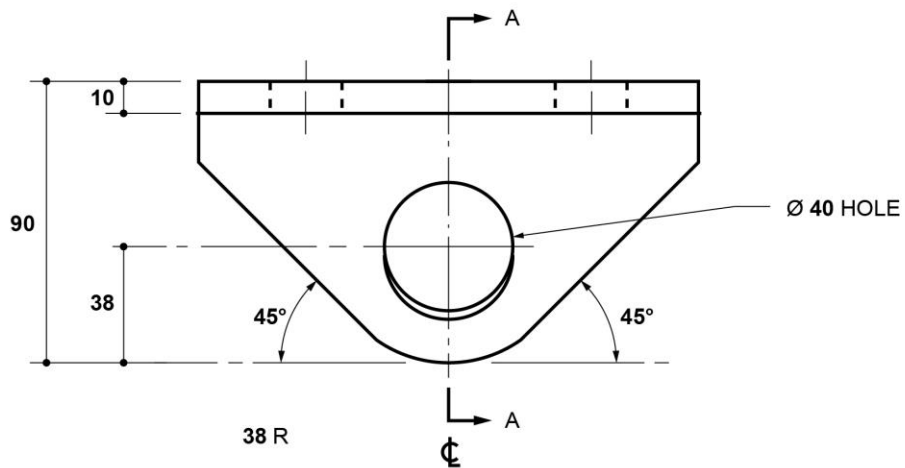
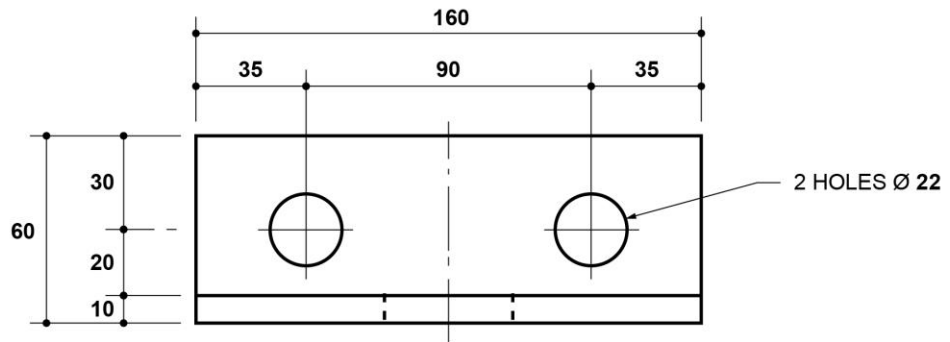
Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-048 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL: 90 x 60 x 10 BSUA

SECT AA

CC 122808

STEELWORK
CROSSARM ATTACHMENT PLATE
DOWNLEAD
(132 kV WOOD POLE LINE)

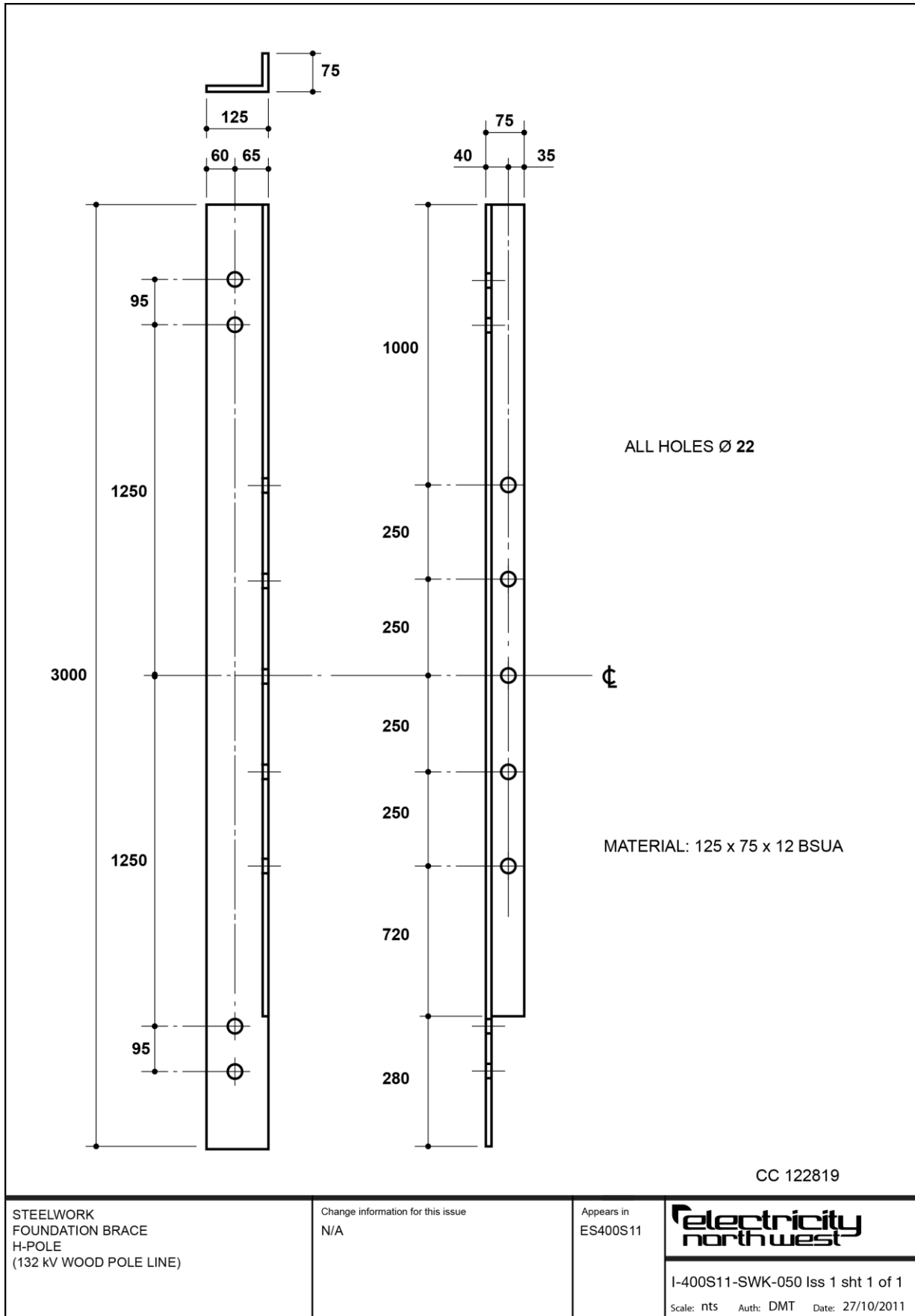
Change information for this issue
N/A

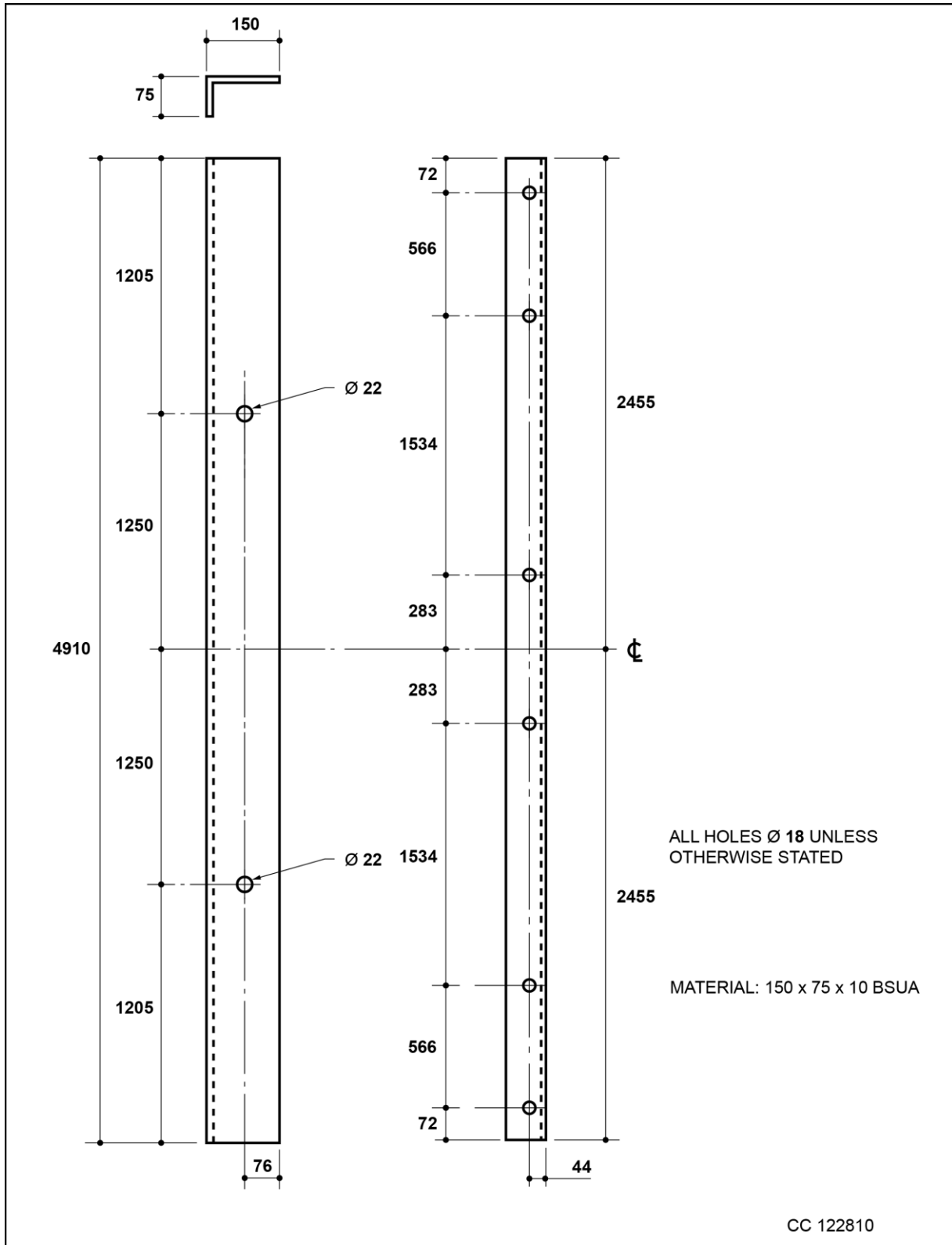
Appears in
ES400S11

electricity north west

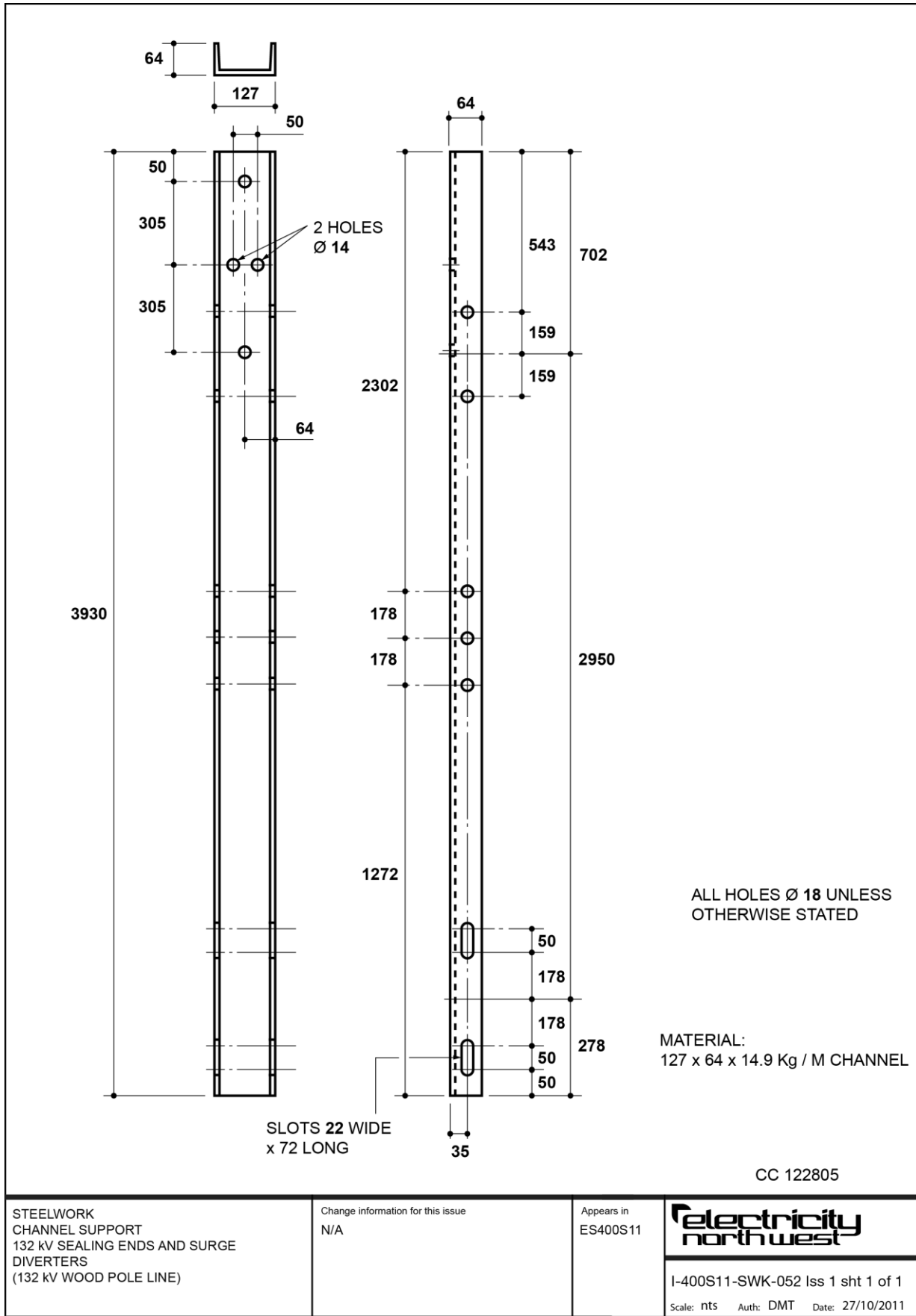
I-400S11-SWK-049 Iss 1 sht 1 of 1

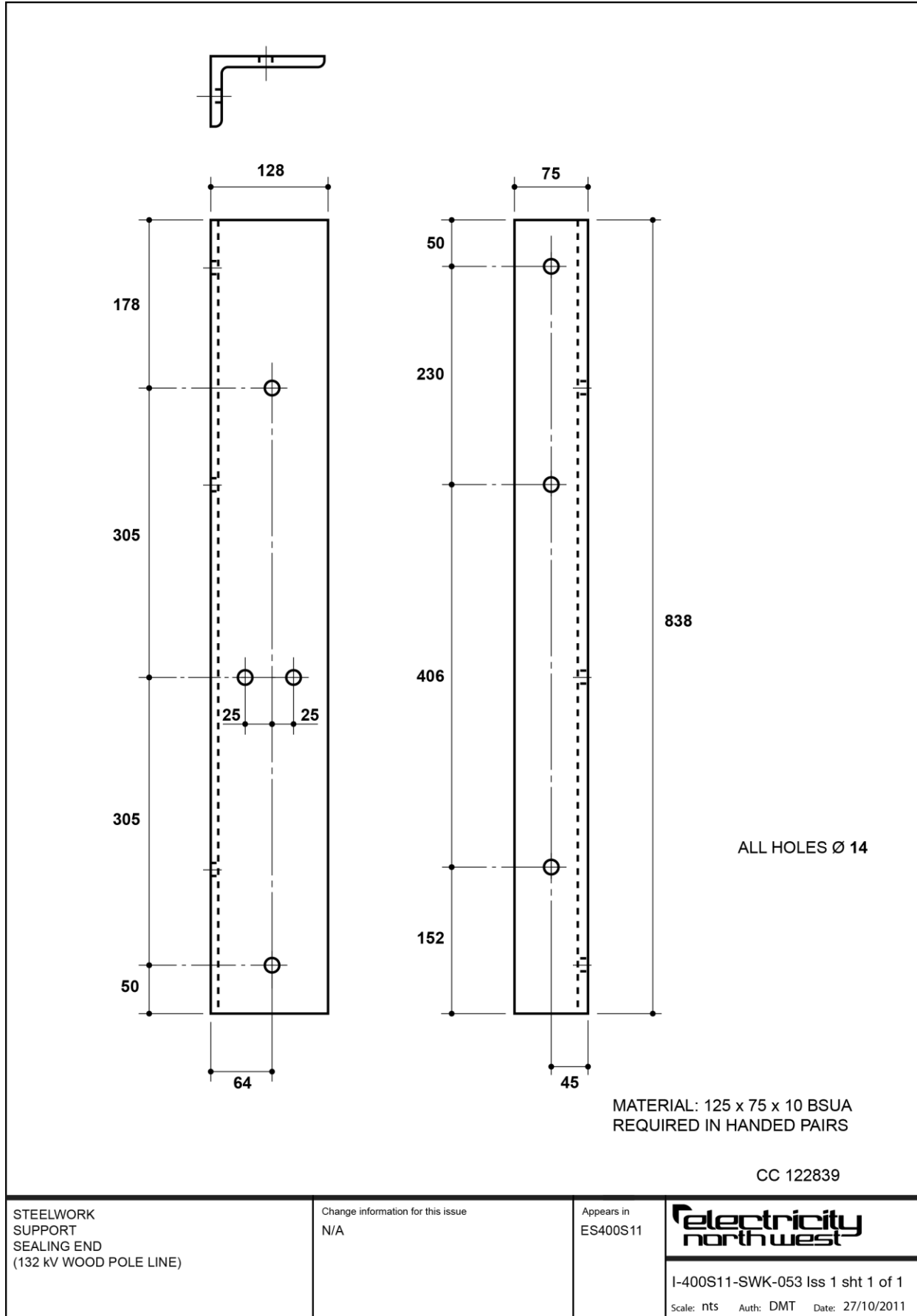
Scale: nts Auth: DMT Date: 27/10/2011

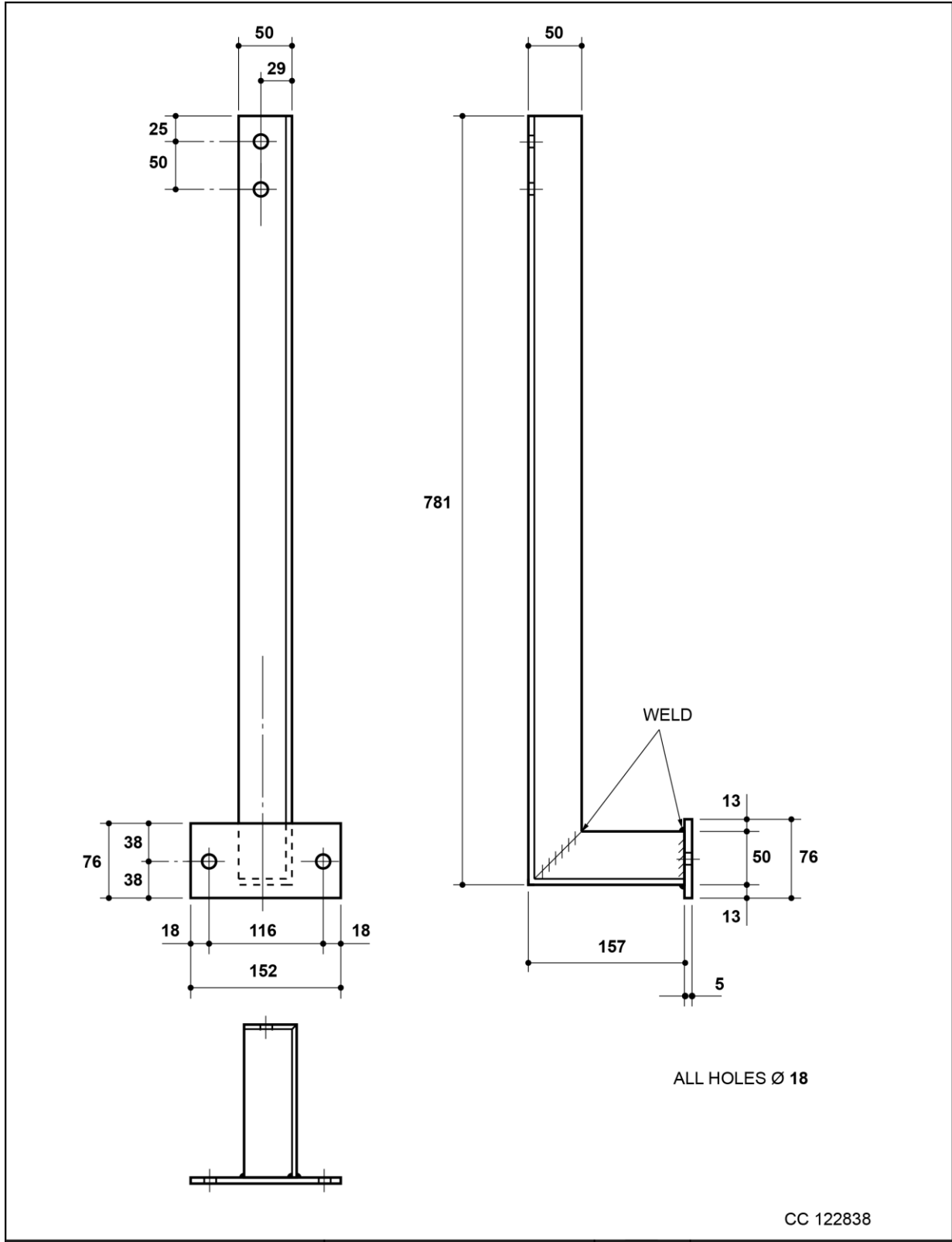




<p>STEELWORK CROSSARM CABLE TERMINAL 2500mm CENTRES (132 KV WOOD POLE LINE)</p>	<p>Change information for this issue N/A</p>	<p>Appears in ES400S11</p>	<p>electricity north west</p> <p>I-400S11-SWK-051 Iss 1 sht 1 of 1 Scale: nts Auth: DMT Date: 27/10/2011</p>
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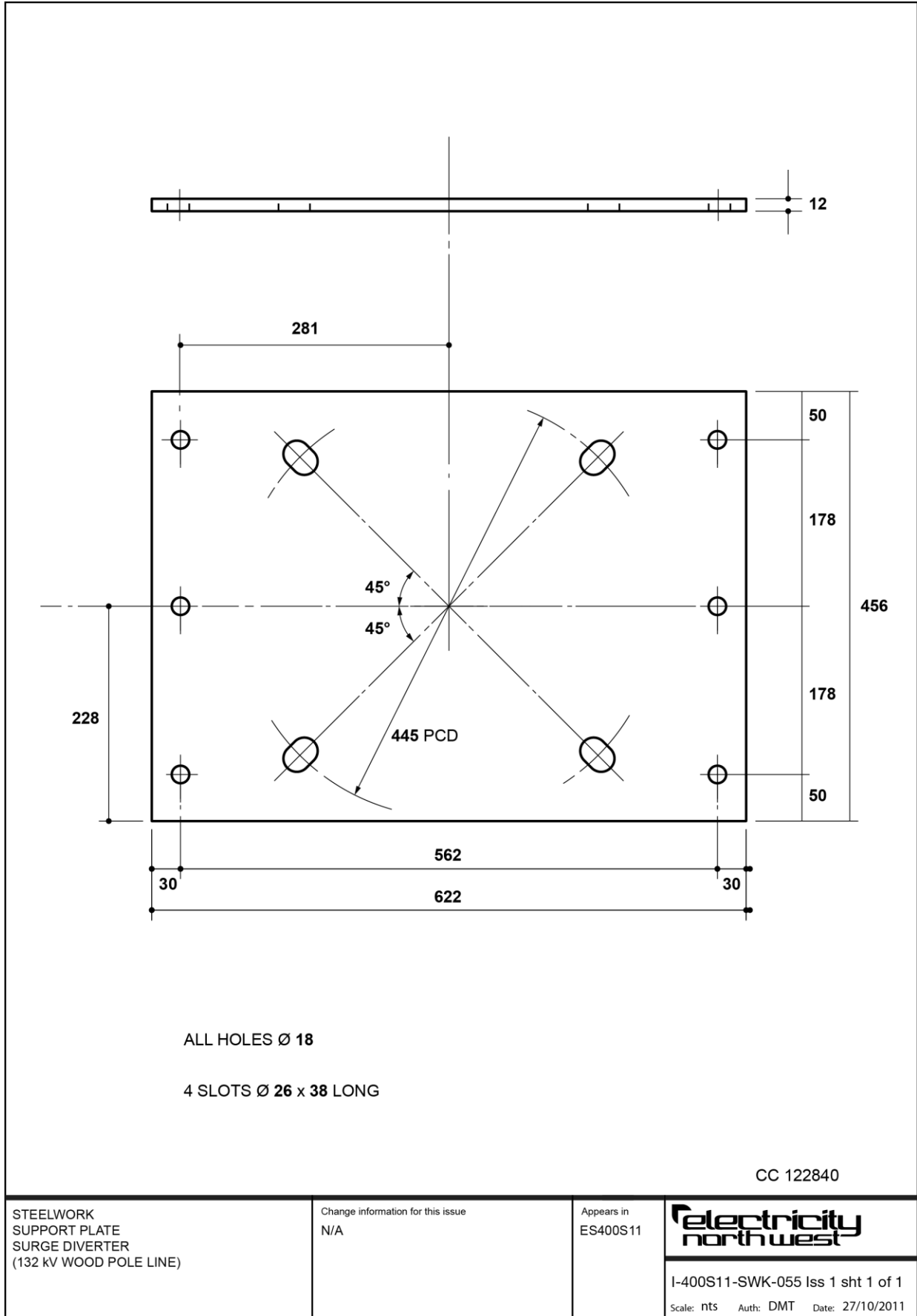


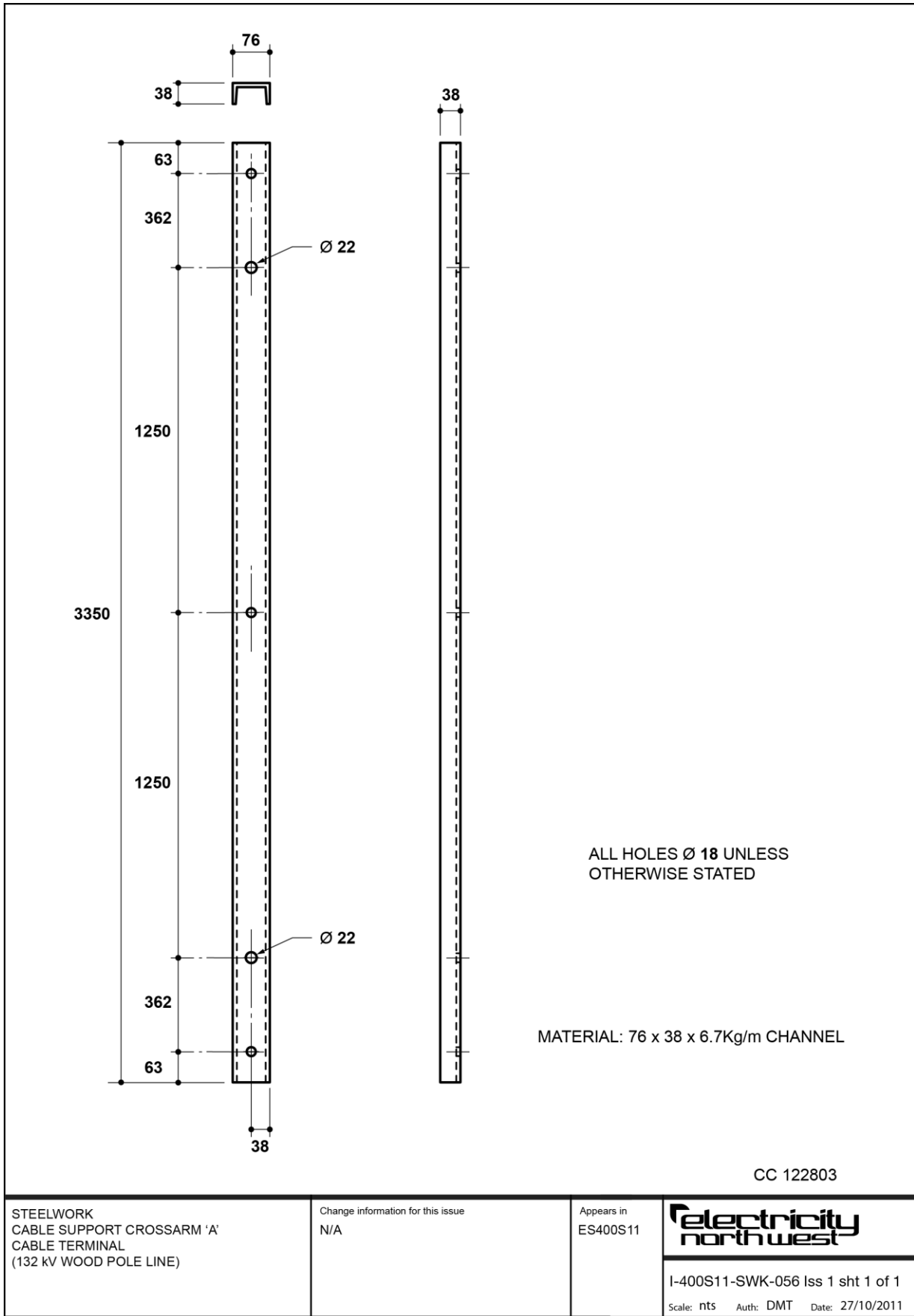
STEELWORK
SUPPORT
CABLE CLEATS
(132 KV WOOD POLE LINE)

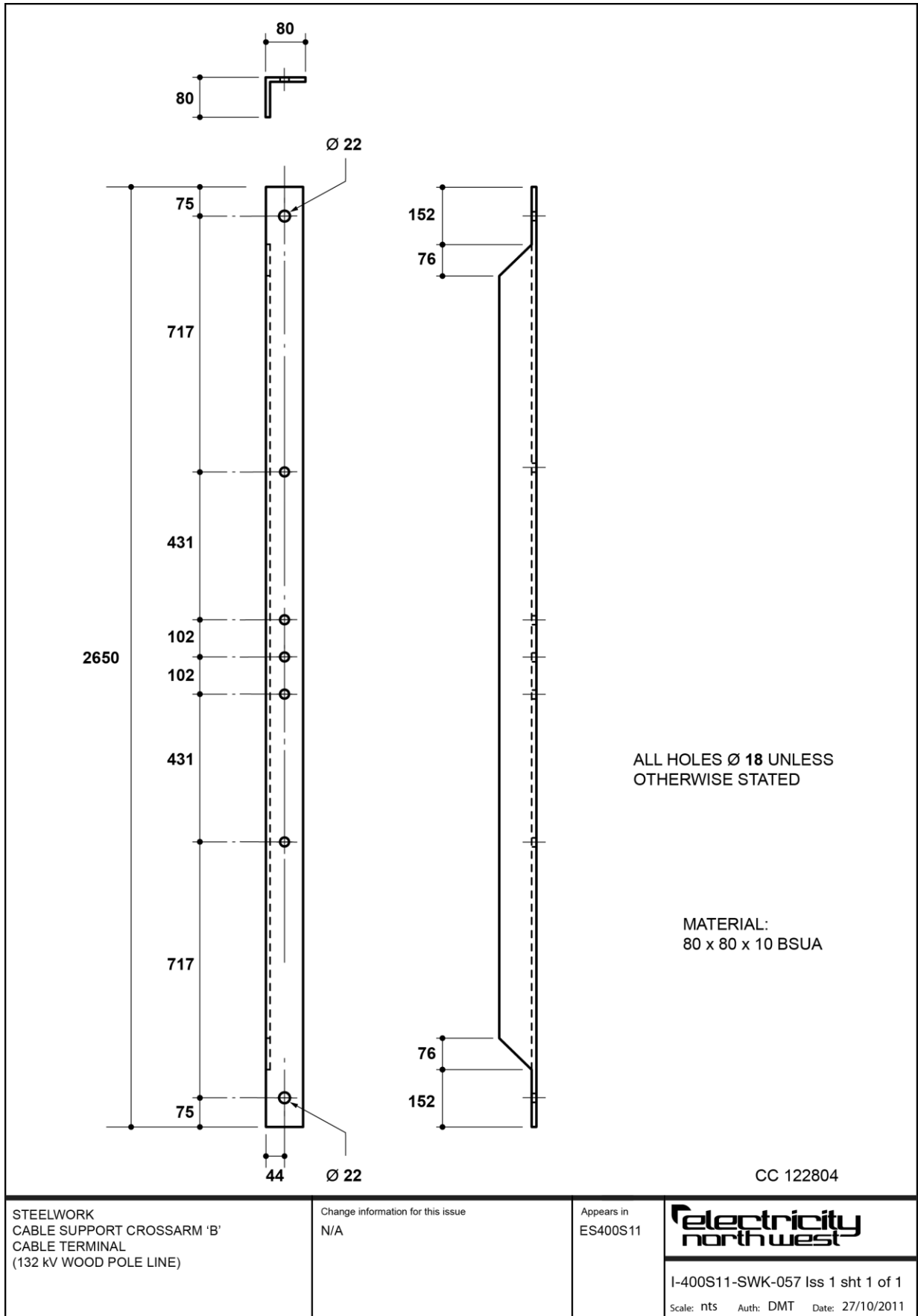
Change information for this issue
N/A

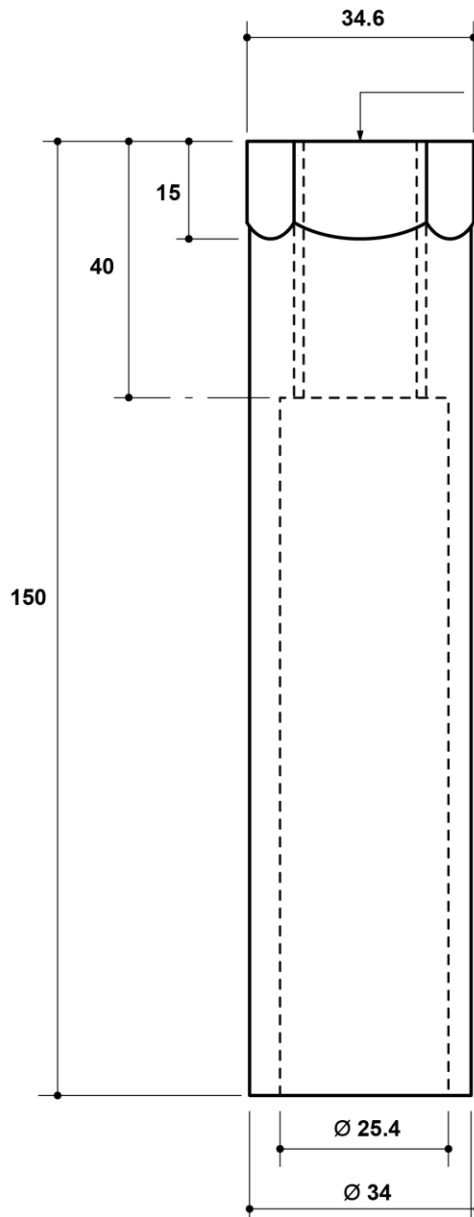
Appears in
ES400S11

electricity north west
I-400S11-SWK-054 Iss 1 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011









END OF TUBE SOLID FORGED HEX
FROM THE TUBE AND TAPPED
M20 RIGHT HAND THREAD

NOTES:

1. TUBE. HEAVY GAUGE STEEL
TUBE TO BS 1387
THREADS: COARSE PITCH CLASS
7H TO BS 3643

2. GALVANIZED TO BS EN ISO 1461
AFTER MACHINING. INTERNAL
THREADING SHALL BE CARRIED OUT
AFTER GALVANIZING. THREADS
BEING WELL OILED

CC 122818

STEELWORK
EARTH ATTACHMENT NUT
TEMPORARY
(132 KV WOOD POLE LINE)

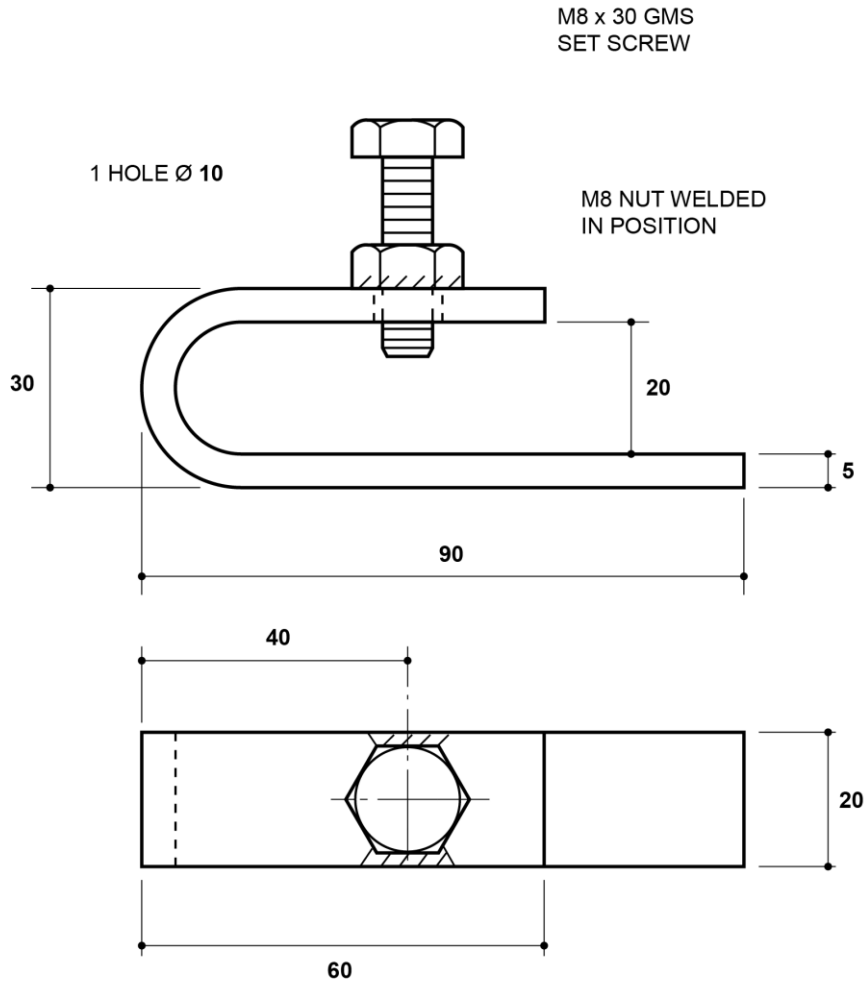
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-058 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL
5 THK GMS PLATE
ALL PARTS TO BE GALVANIZED TO BS EN ISO 1461
AFTER WELDING

NOTE
FOR USE ONLY WHEN LEG HOLES
ARE UNAVAILABLE

CC 122817

STEELWORK
CLIP
CIRCUIT COLOUR PLATE

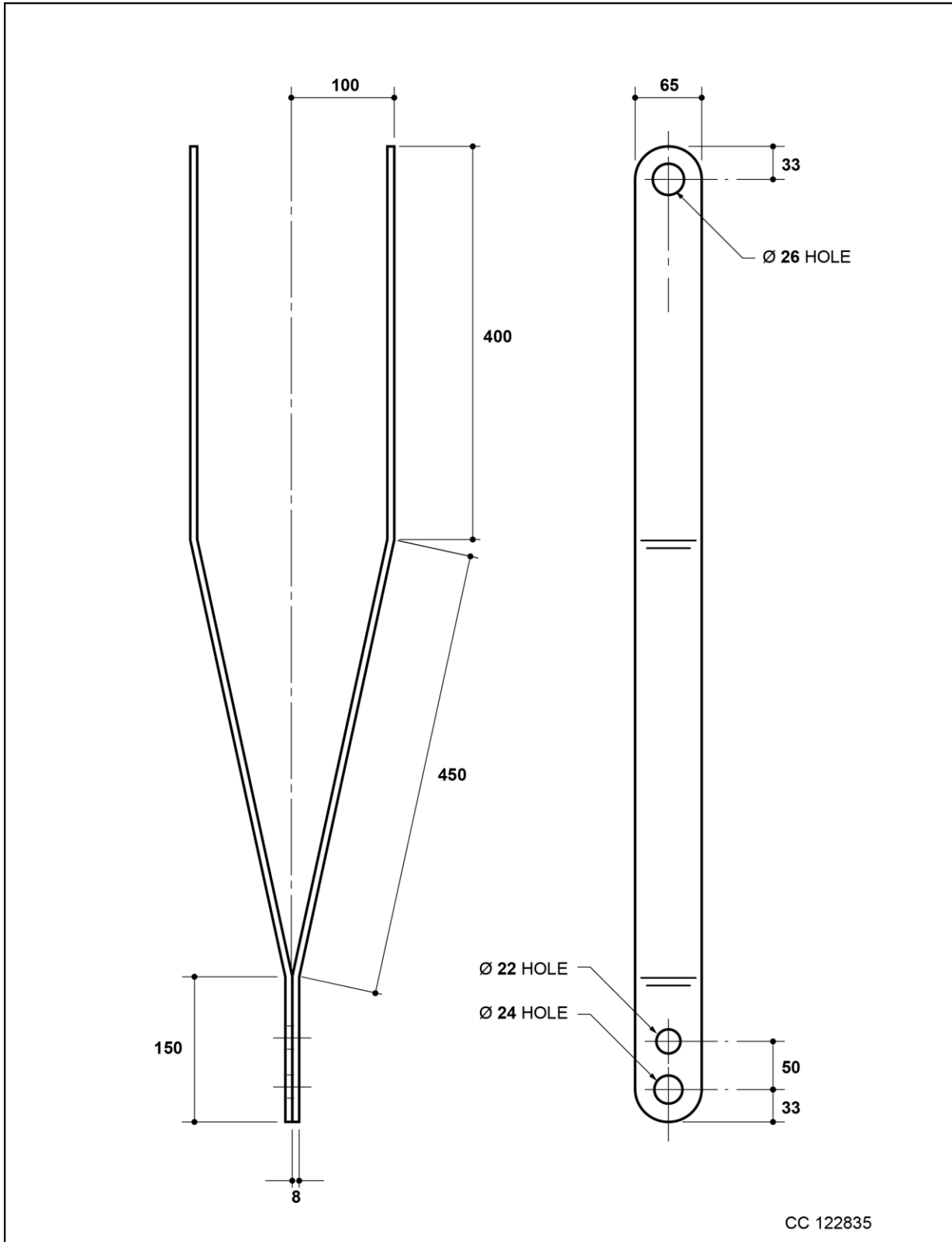
Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-064 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



STEELWORK
STAY STRAP
HEAVY DUTY
(132kV WOOD POLE LINE)

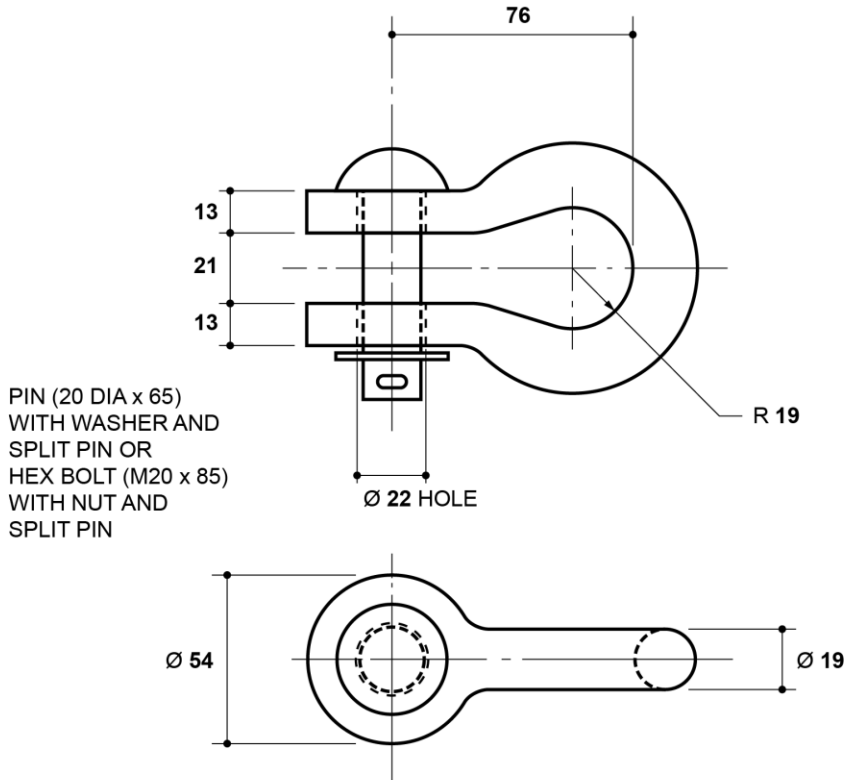
Change information for this issue
N/A

Appears in
ES400S11



I-400S11-SWK-065 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL: FORGED STEEL, GALVANIZED

NOTE
PIN, WASHER AND SPLIT PIN OR
BOLT, NUT AND SPLIT PIN INCLUDED

CC 122830

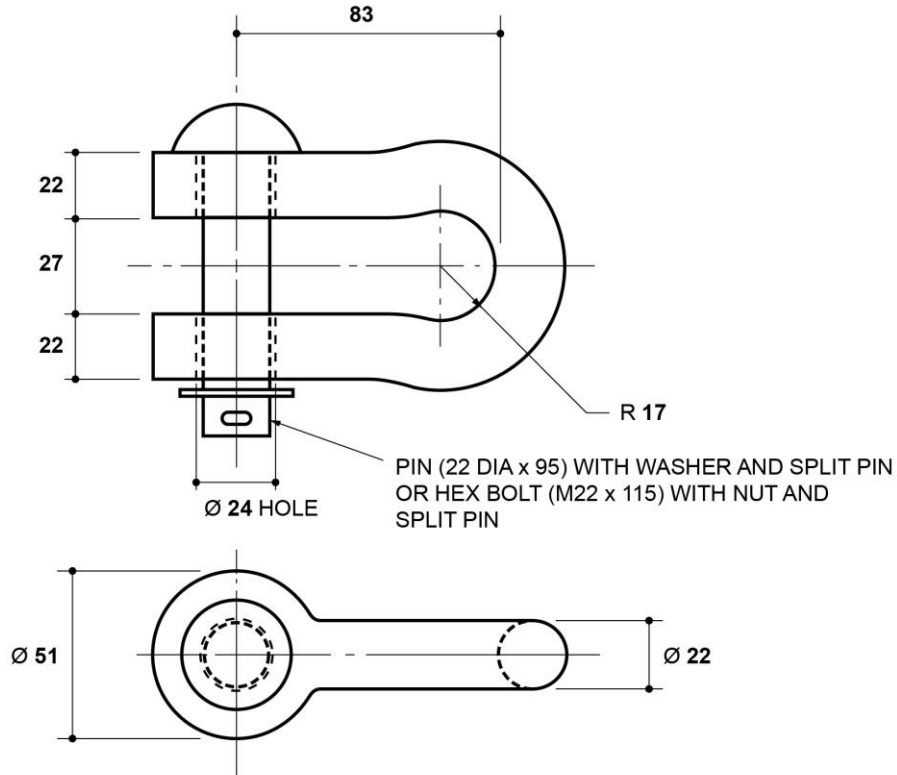
STEELWORK
SHACKLE
28 / 29

Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-066 Iss 2 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL: FORGED STEEL, GALVANIZED

SHACKLE 42/29 AS SHOWN ABOVE (SUPPLIED WITH PIN, WASHER AND SPLIT PIN)

SHACKLE 42/29A AS 42/29 BUT WITH BOLT, WASHER NUT AND SPLIT PIN INSTEAD OF COTTER

42 / 29 CC 122831
42 / 29A CC 122832

STEELWORK
SHACKLE
42 / 29 AND 42 / 29A

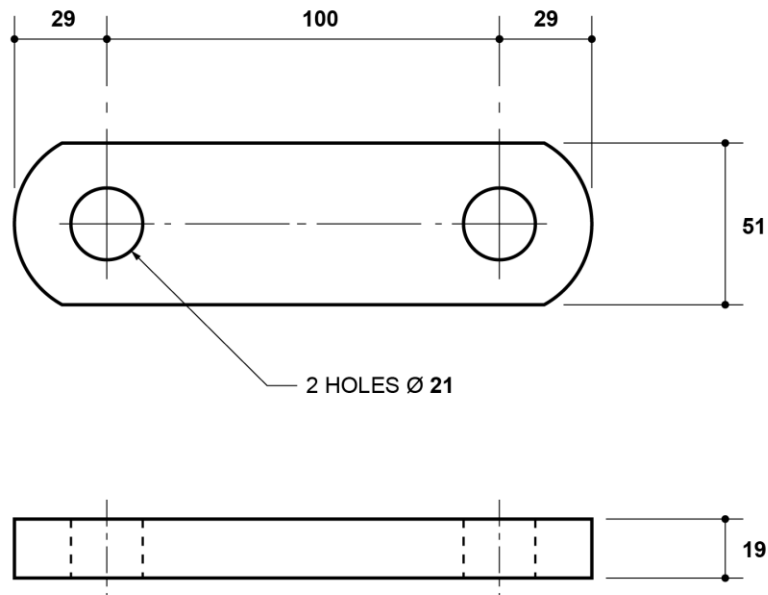
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-067 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL: MILD STEEL, GALVANIZED

NOTES

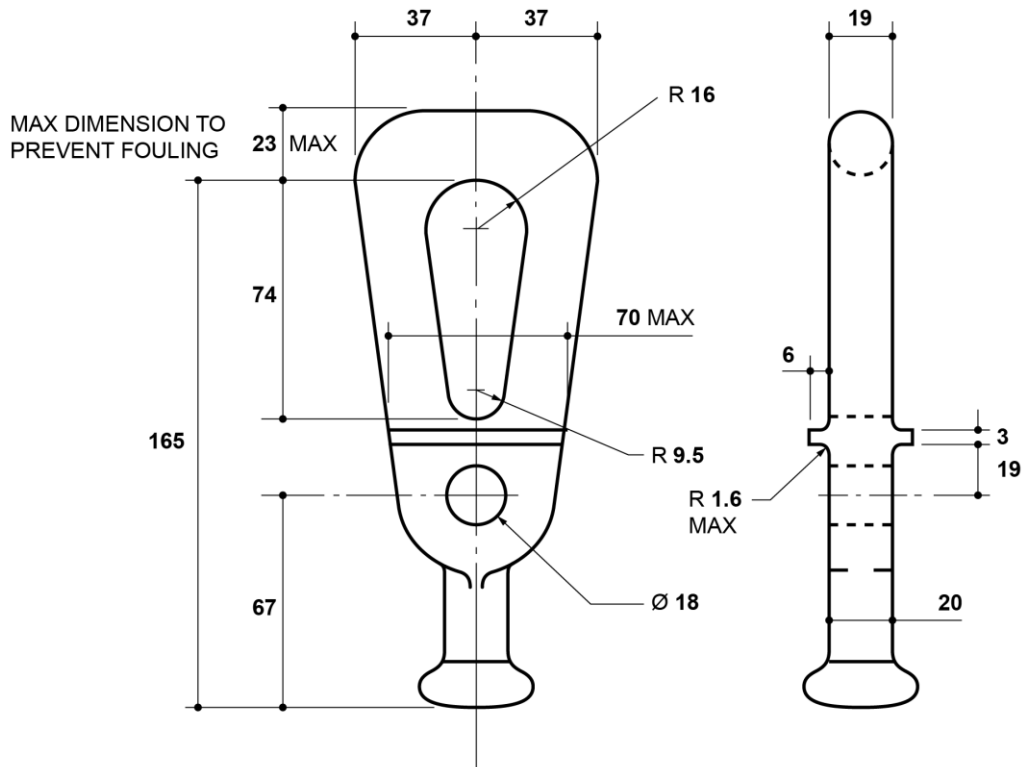
MINIMUM FAILING LOAD = 12,700kg
THIS ITEM SHALL MEET THE GENERAL REQUIREMENTS
OF ENATS 43-91

CC 122829

STEELWORK
LINK, STAY
28 / 86
(132kV WOOD POLE LINE)

Change information for this issue
N/A

Appears in
ES400S11



BALL SIZE 20

CC 122827

STEELWORK
BALL ENDED EYELINK
28 / 30

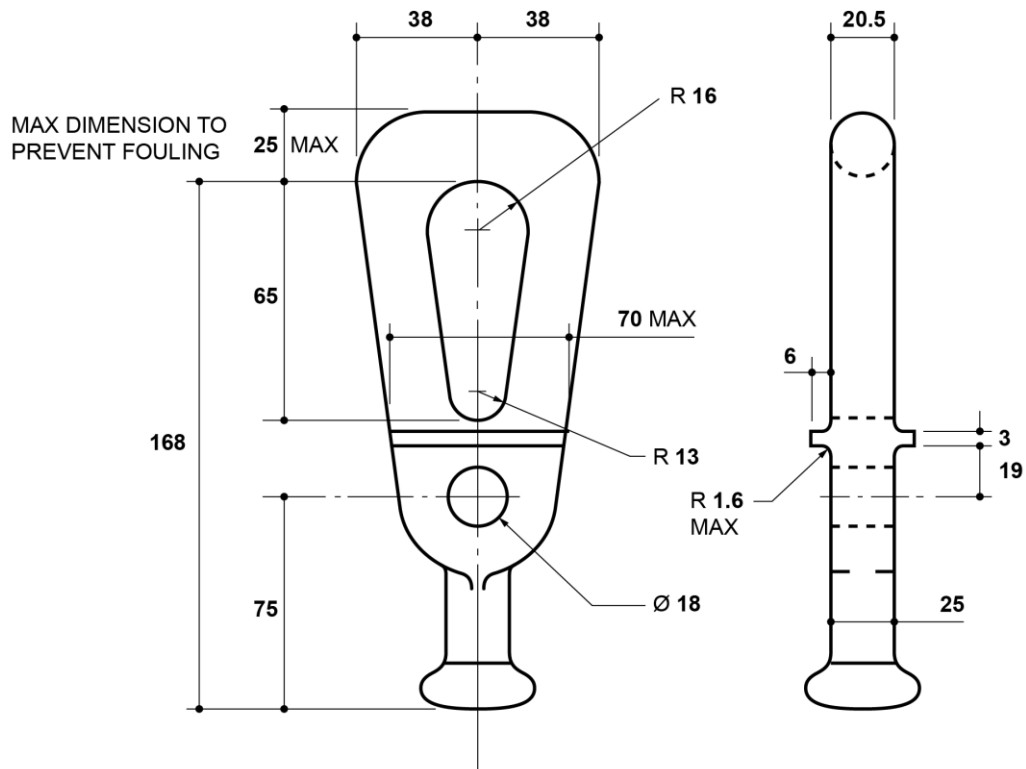
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-069 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



BALL SIZE 24

CC 122828

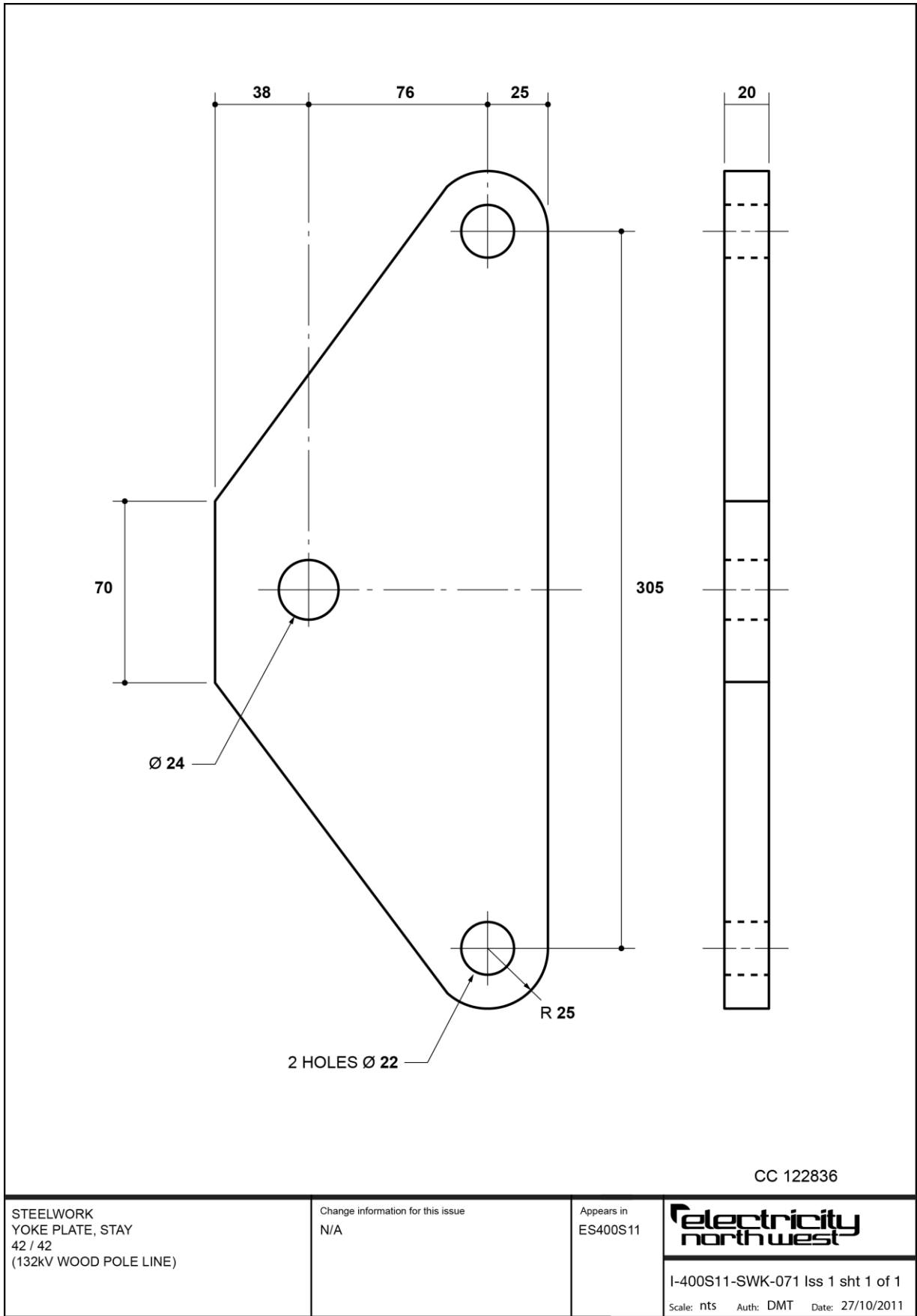
STEELWORK
BALL ENDED EYELINK
42 / 30

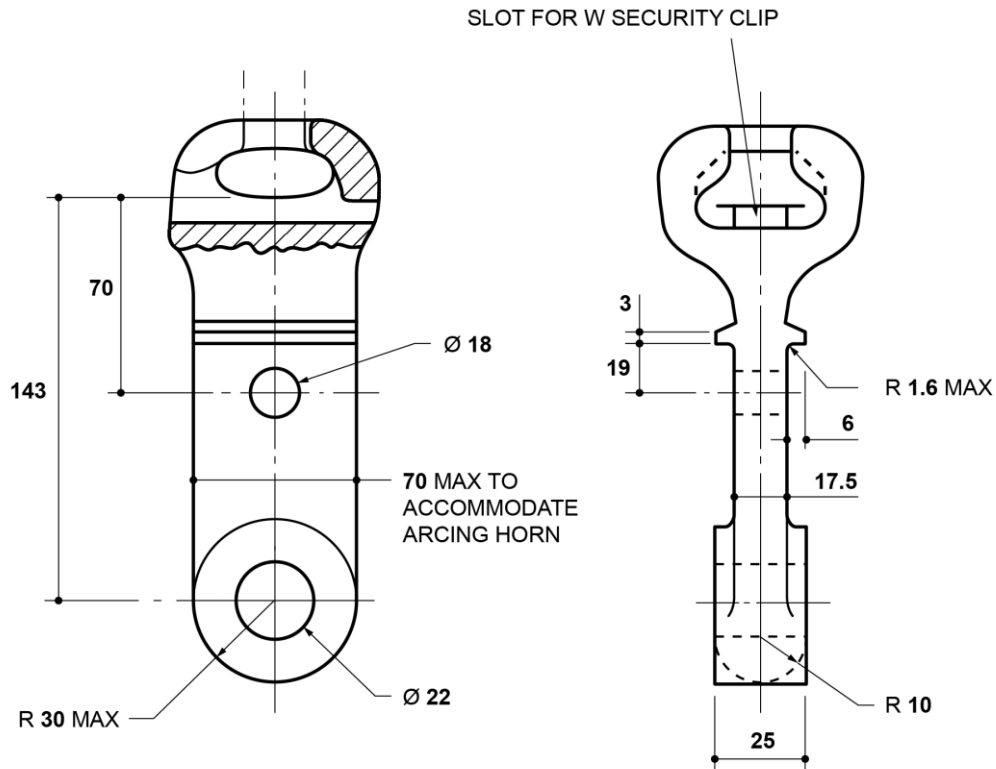
Change information for this issue
N/A

Appears in
ES400S11



I-400S11-SWK-070 Iss 2 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011





SOCKET SIZE 20

NOTE
SECURITY CLIP INCLUDED

CC 122834

STEELWORK
SOCKET TONGUE, STAY
28 / 36A

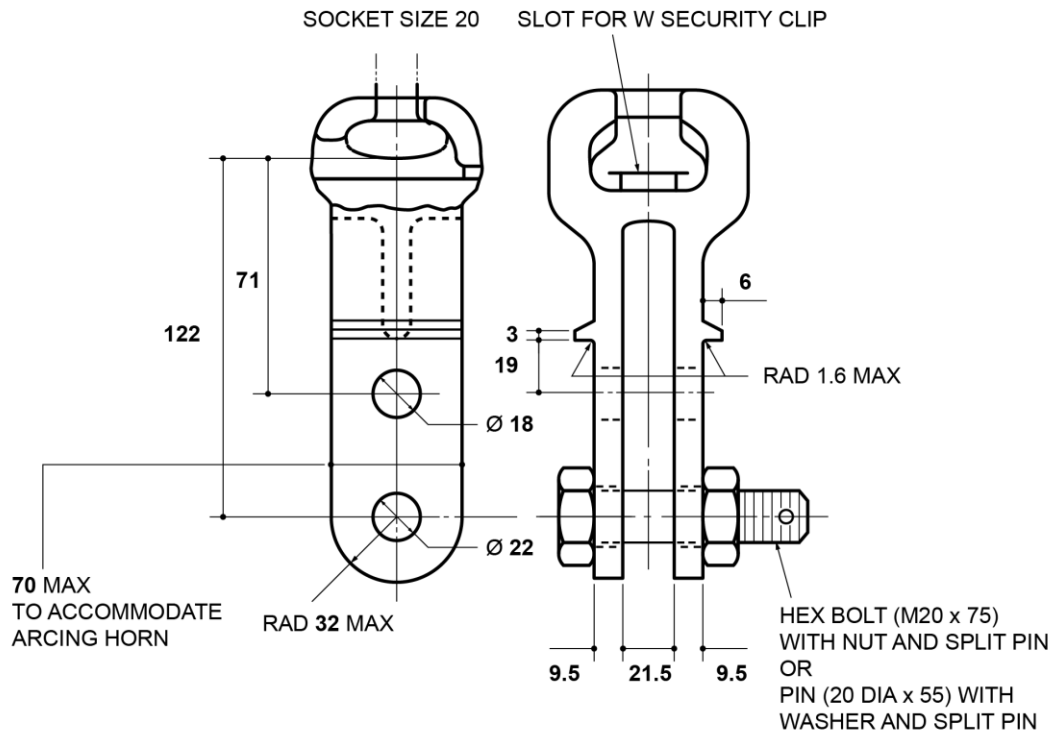
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-072 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



NOTE
SECURITY CLIP, BOLT, NUT AND SPLIT PIN OR
SECURITY CLIP, PIN, WASHER AND SPLIT PIN
INCLUDED

CC 109594

STEELWORK
SOCKET CLEVIS, 28 / 31

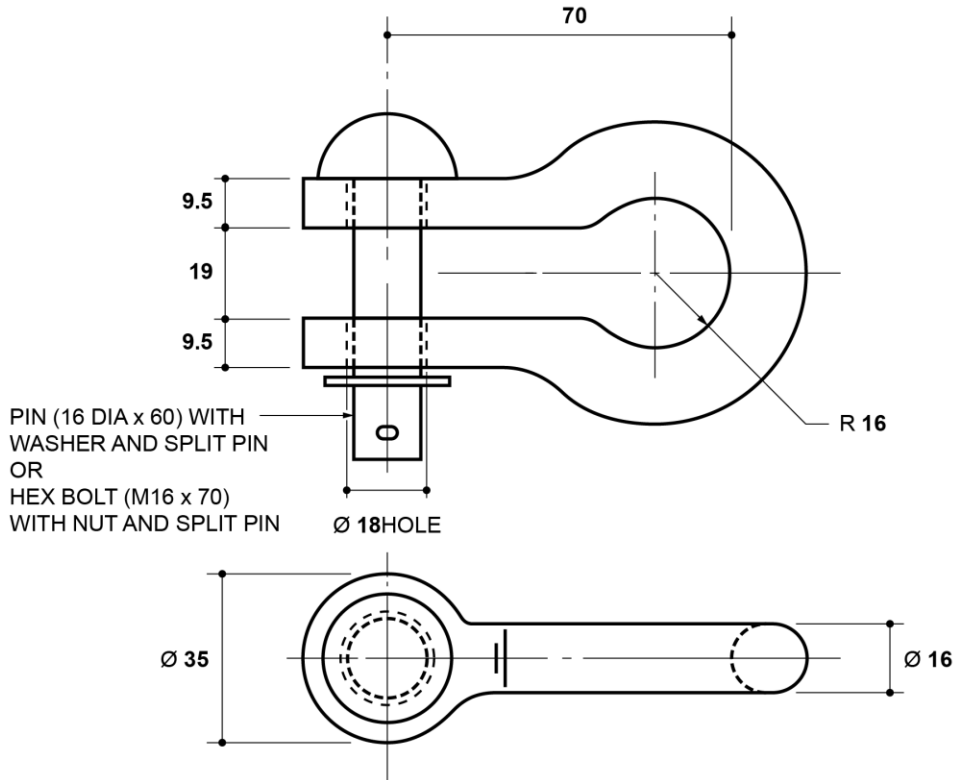
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-073 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



MATERIAL: FORGED STEEL, GALVANIZED

NOTE
PIN, WASHER AND SPLIT PIN OR
BOLT, NUT AND SPLIT PIN INCLUDED

CC 133204

STEELWORK
SHACKLE
INSULATOR
15 / 29

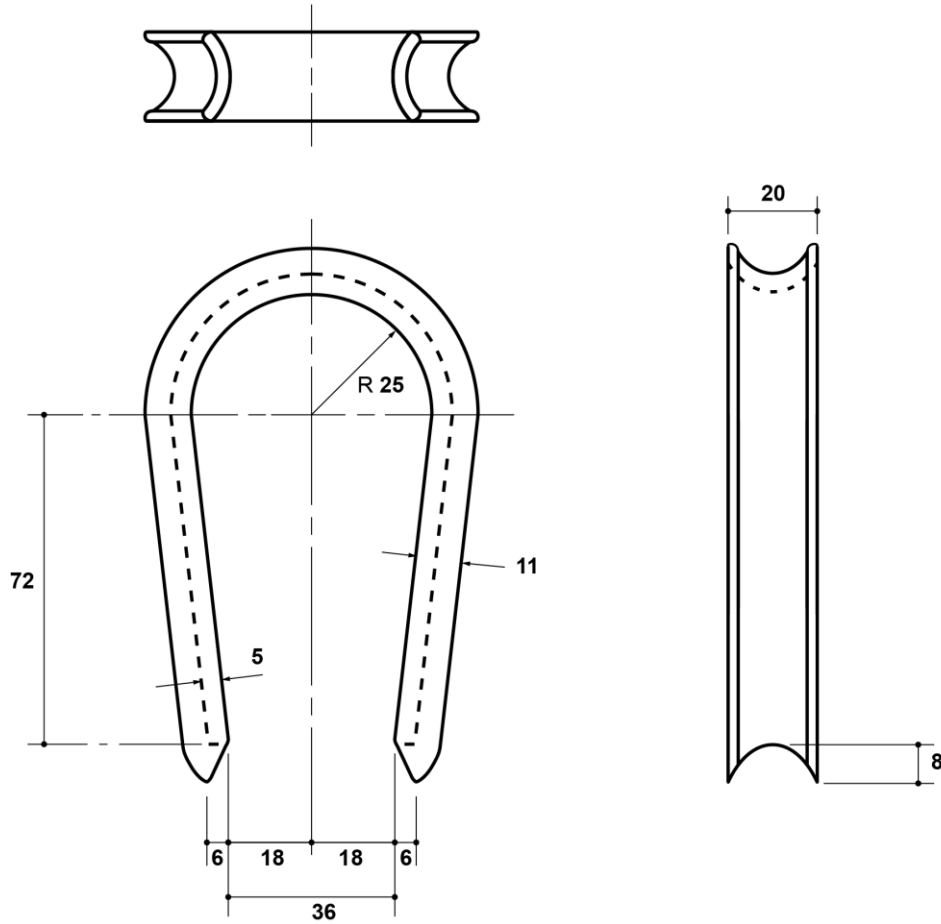
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-074 Iss 2 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



CC 132241

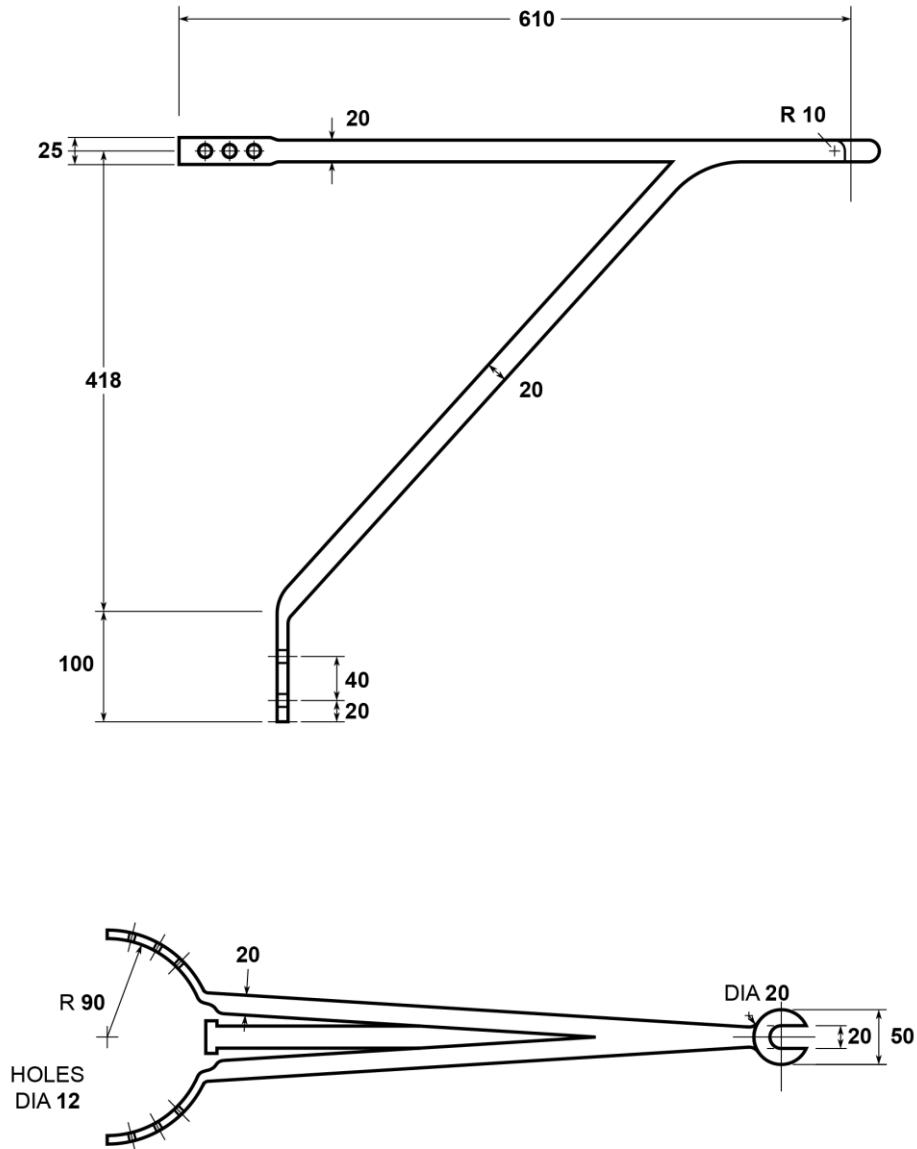
STEELWORK
THIMBLE
OPEN-ENDED, STAY

Change information for this issue
N/A

Appears in
ES400S11

**electricity
north west**

I-400S11-SWK-075 Iss 2 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011



CC 110399

STEELWORK,
STAY OUTRIGGER BRACKET

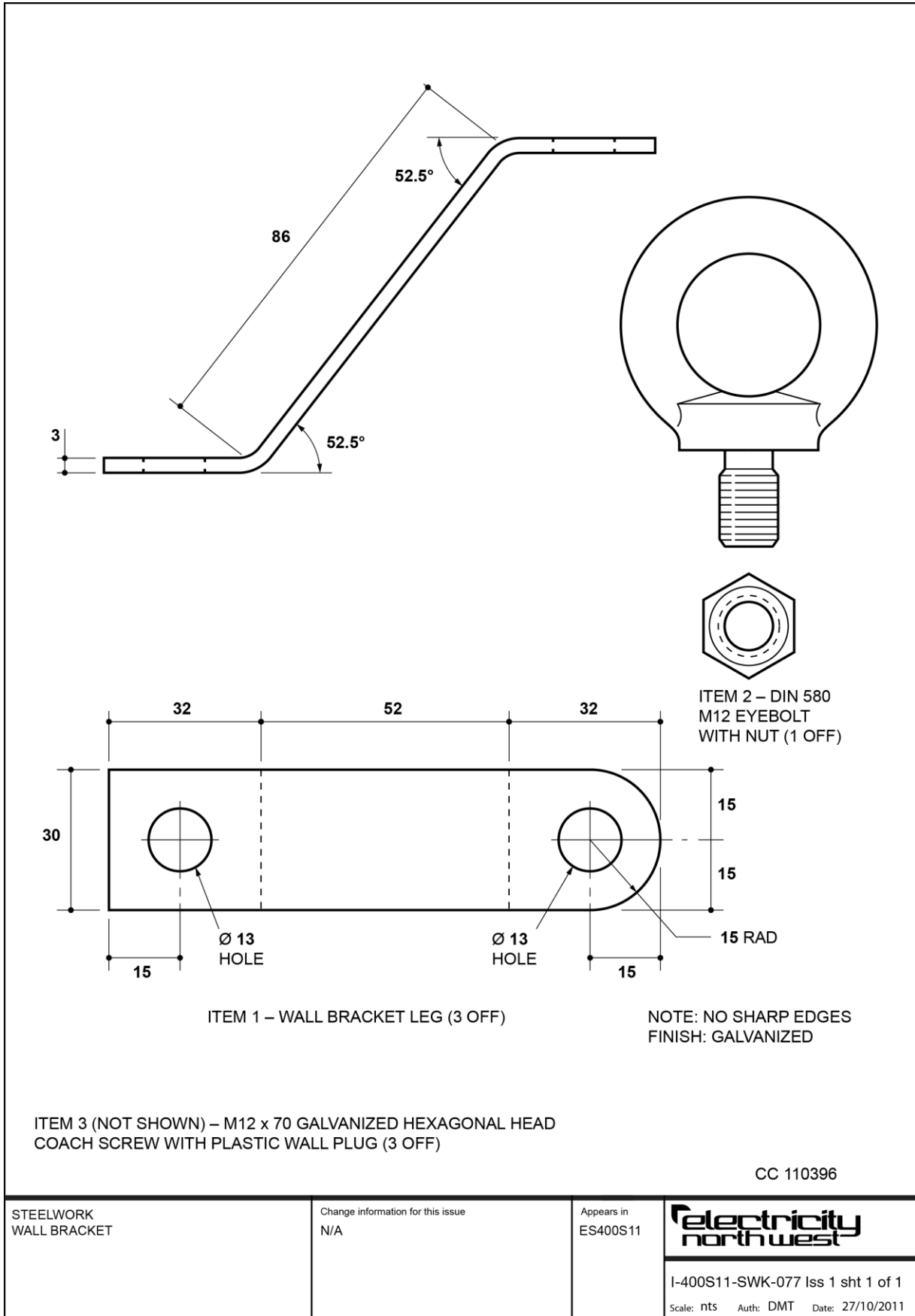
Change information for this issue
N/A

Appears in
ES400S11



I-400S11-SWK-076 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



STEELWORK
WALL BRACKET

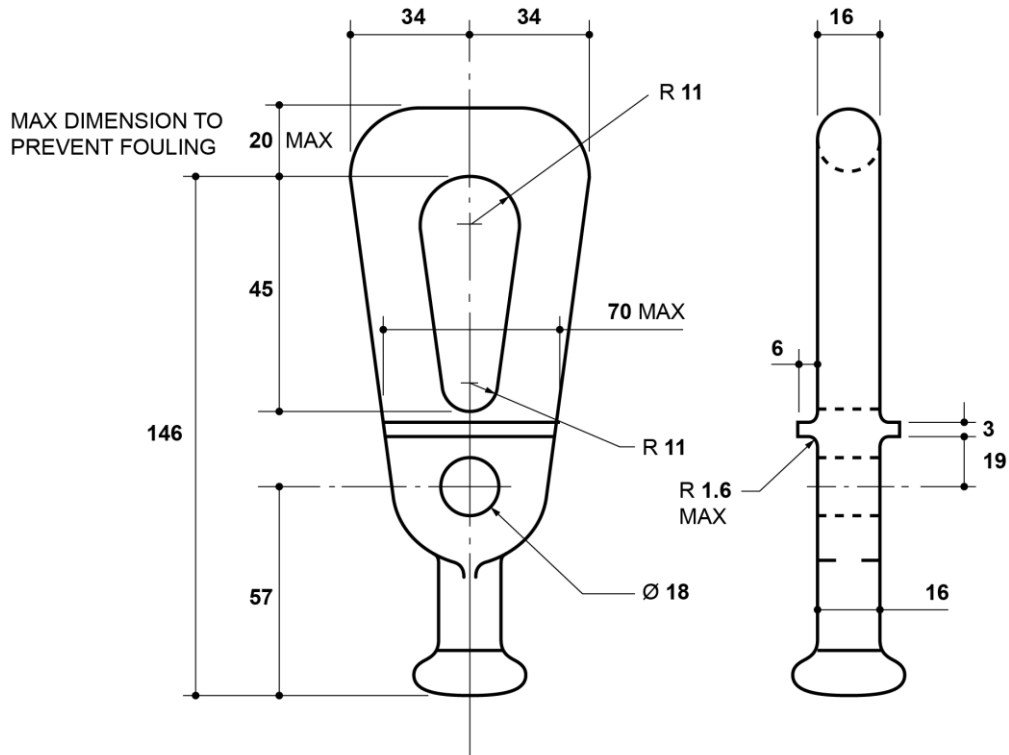
Change information for this issue
N/A

Appears in
ES400S11

Electricity north west

I-400S11-SWK-077 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



BALL SIZE 16

CC 122841

STEELWORK
BALL ENDED EYELINK
INSULATOR
15 / 30

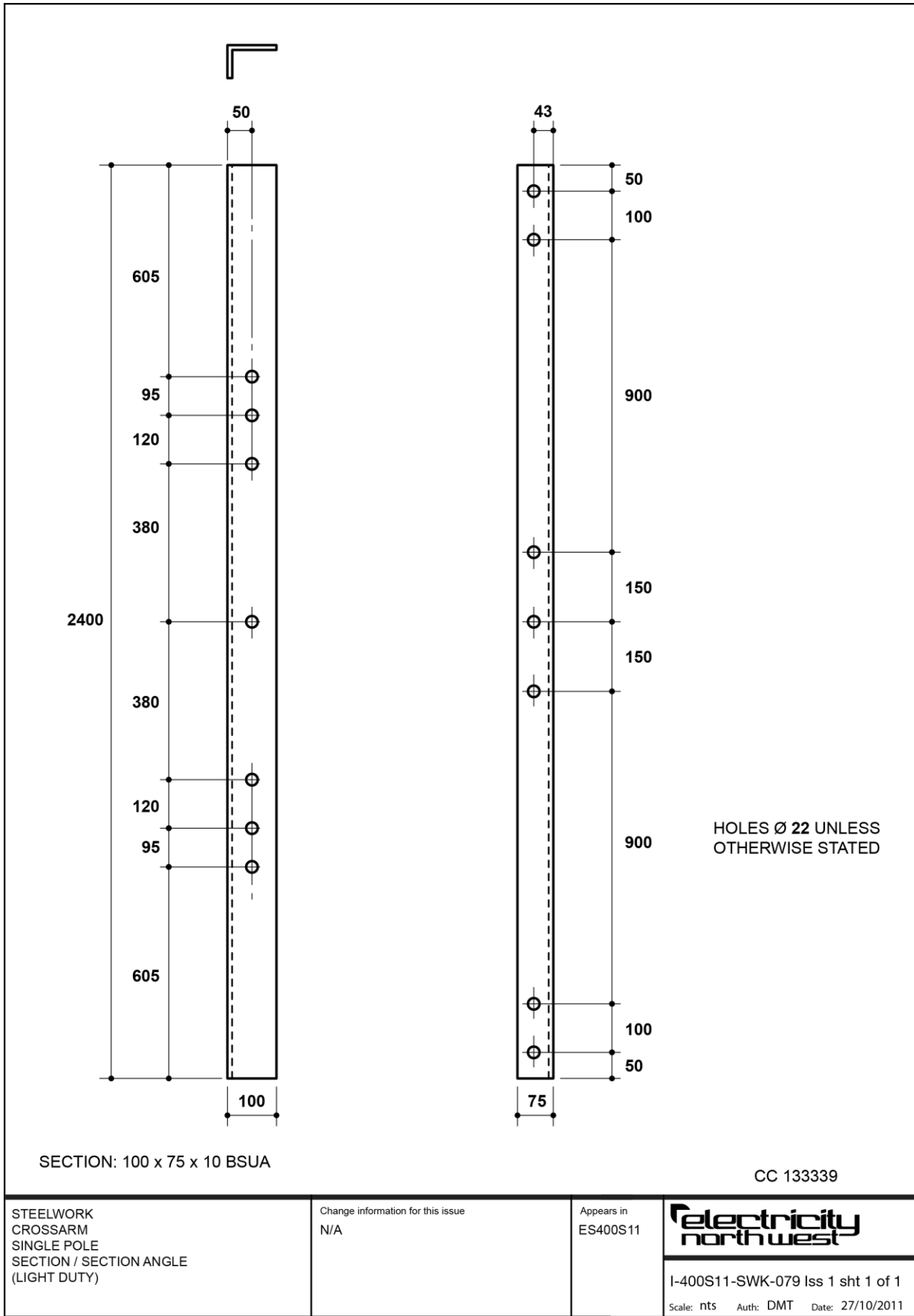
Change information for this issue
N/A

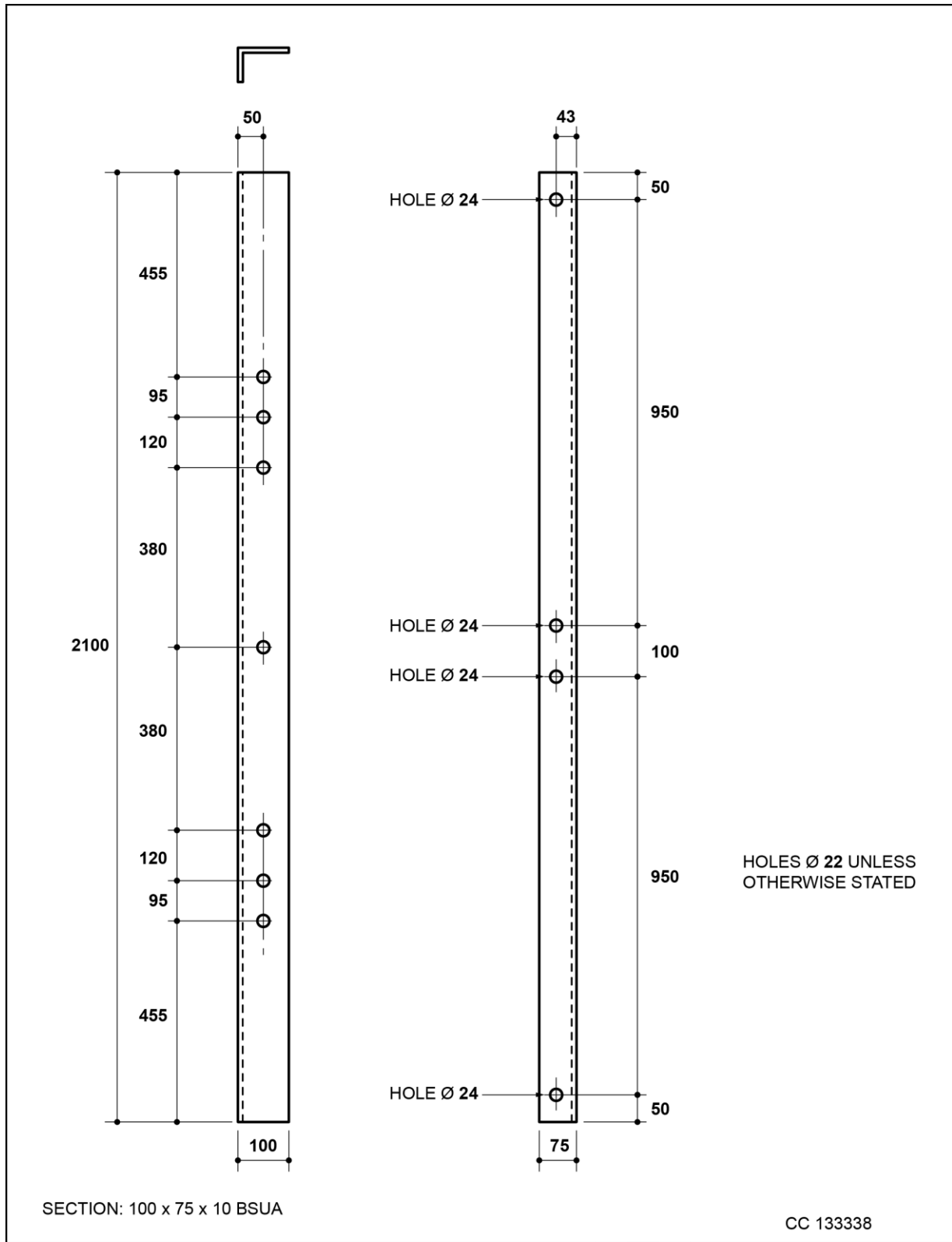
Appears in
ES400S11

**Electricity
north west**

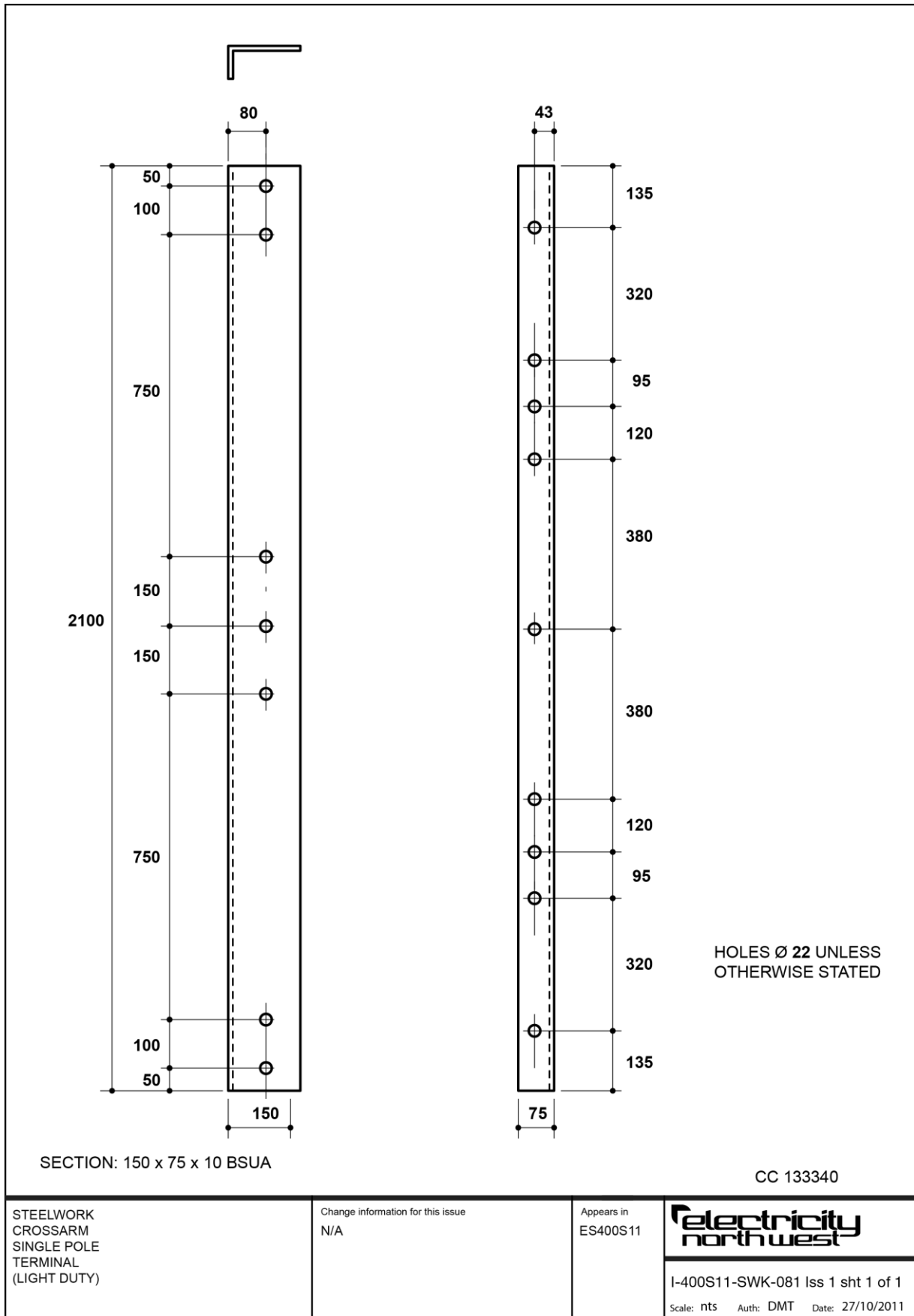
I-400S11-SWK-078 Iss 1 sht 1 of 1

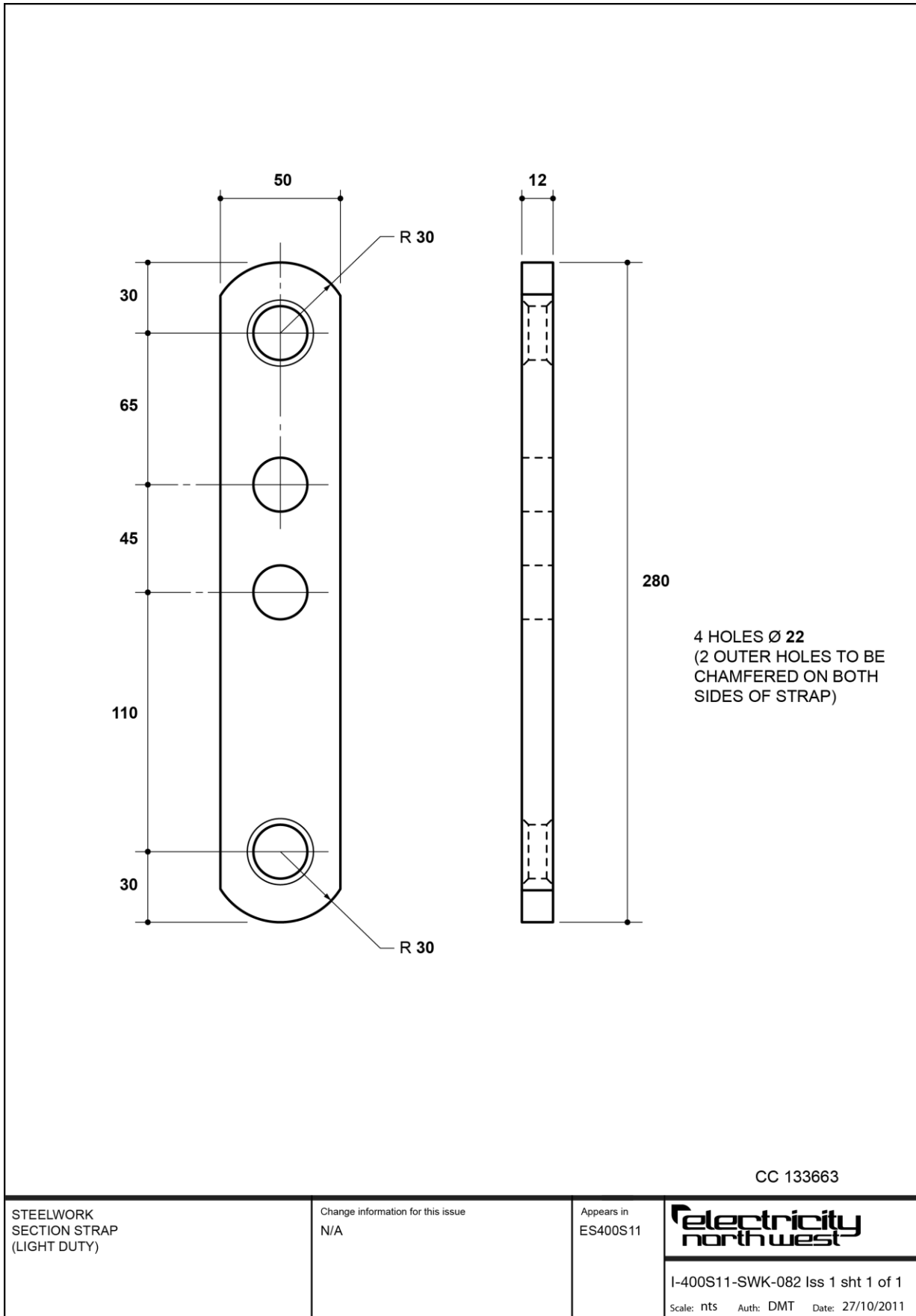
Scale: nts Auth: DMT Date: 27/10/2011

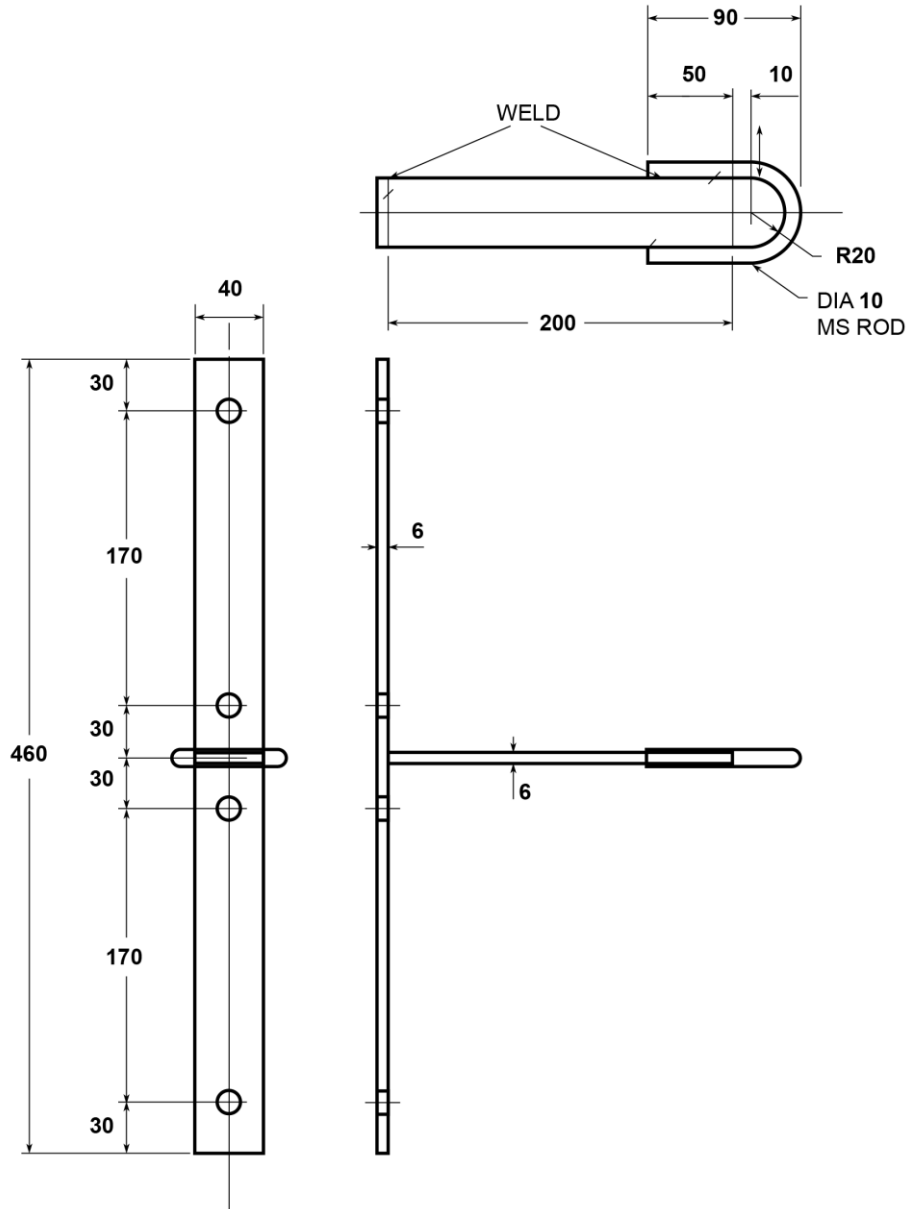




<p>STEELWORK CROSSARM SINGLE POLE INTERMEDIATE / PIN ANGLE (LIGHT DUTY)</p>	<p>Change information for this issue N/A</p>	<p>Appears in ES400S11</p>	<p>electricity north west I-400S11-SWK-080 Iss 1 sht 1 of 1 Scale: nts Auth: DMT Date: 27/10/2011</p>
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CC 110398

STEELWORK
WALL BRACKET
FLAT

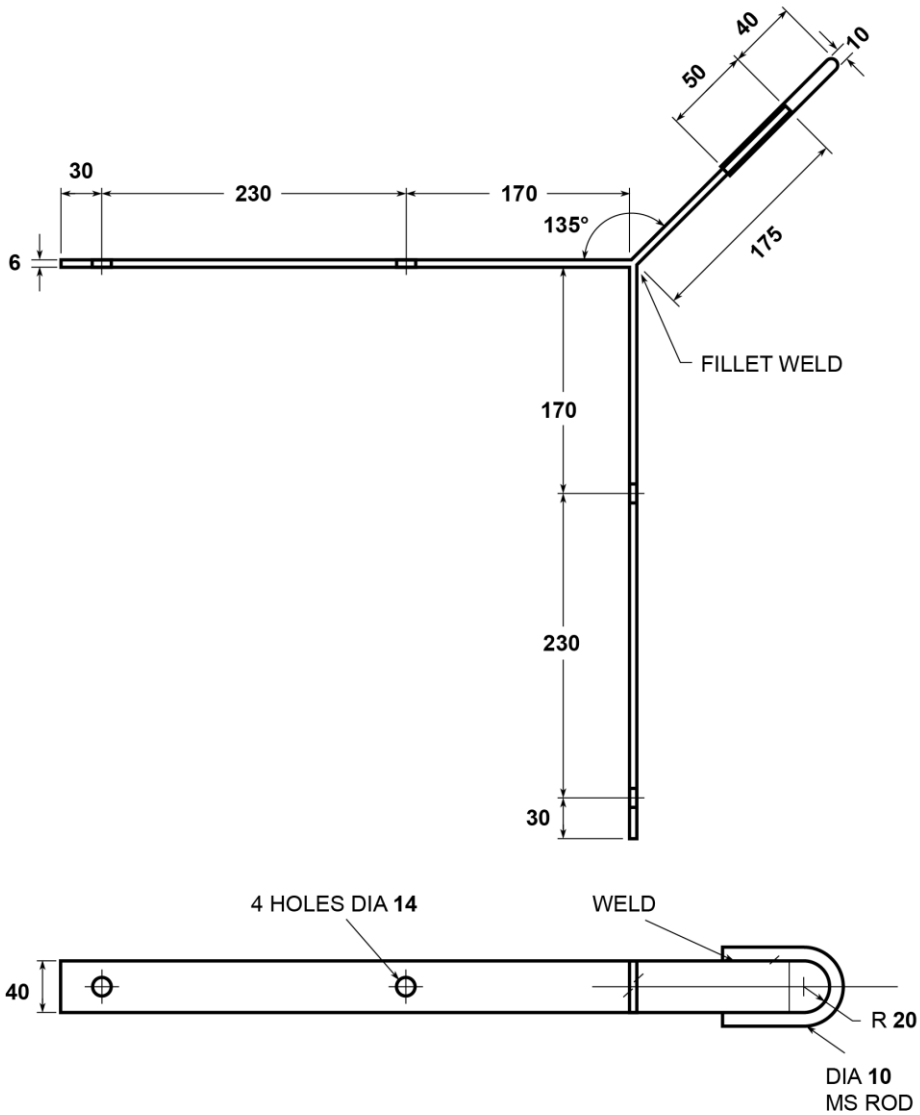
Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-083 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011



CC 110397

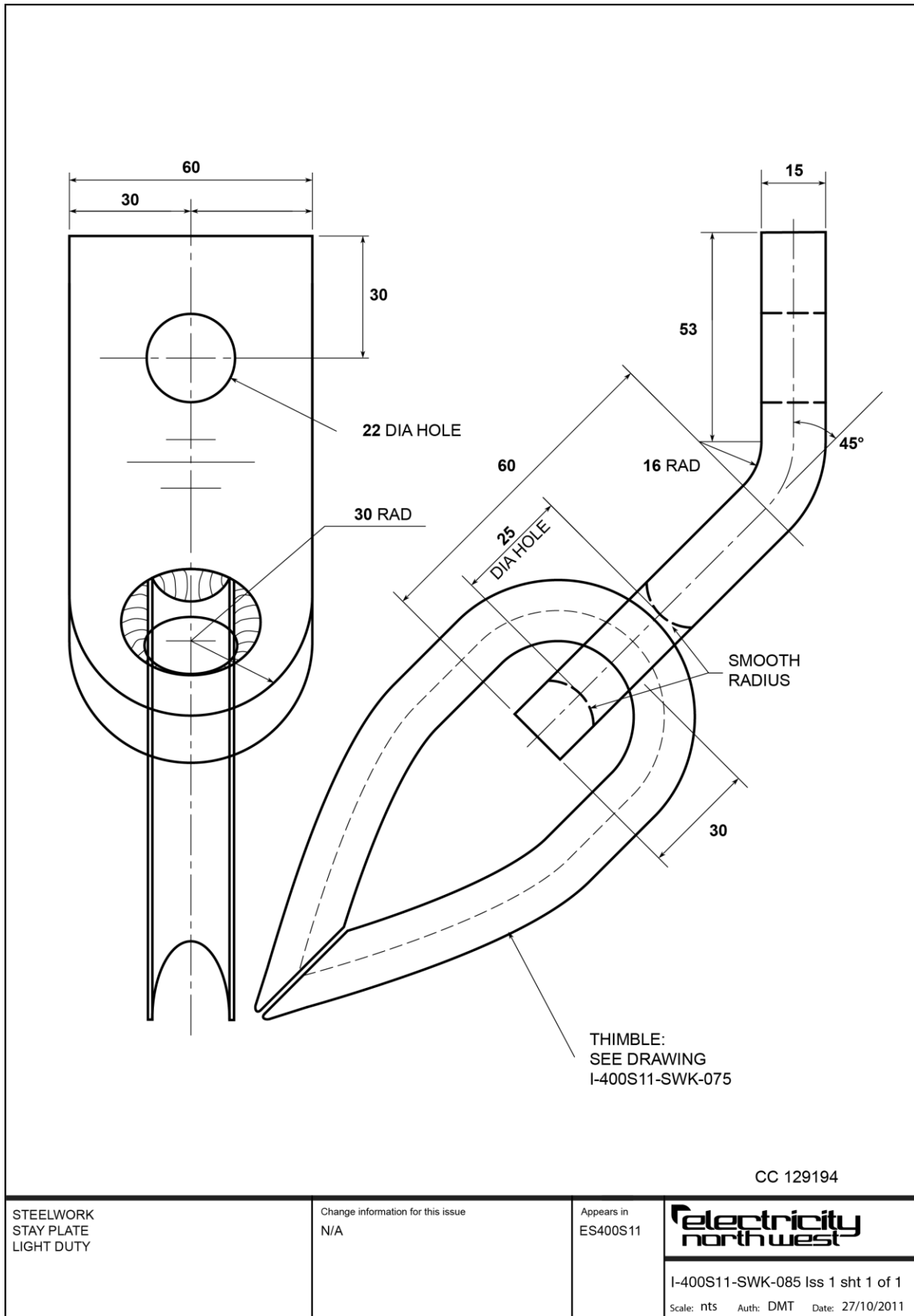
STEELWORK
WALL BRACKET
CORNER

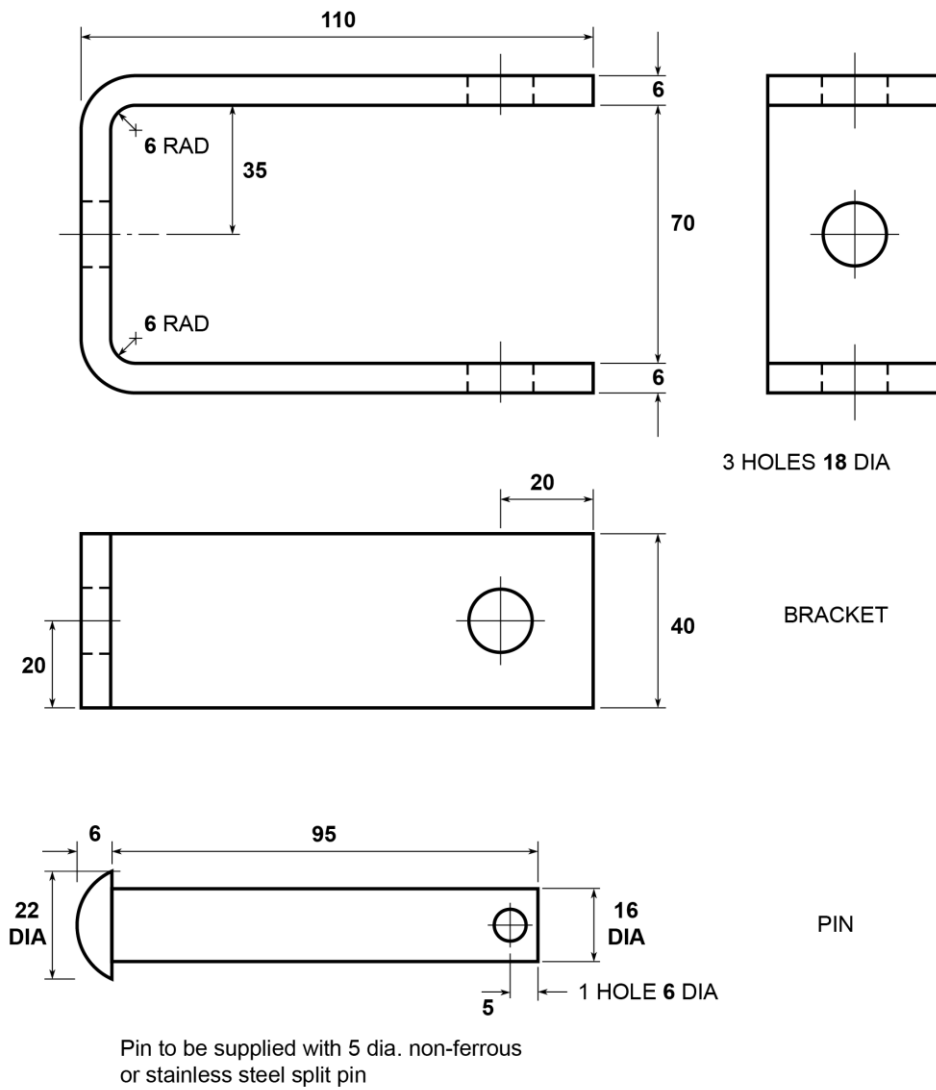
Change information for this issue
N/A

Appears in
ES400S11



I-400S11-SWK-084 Iss 1 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011



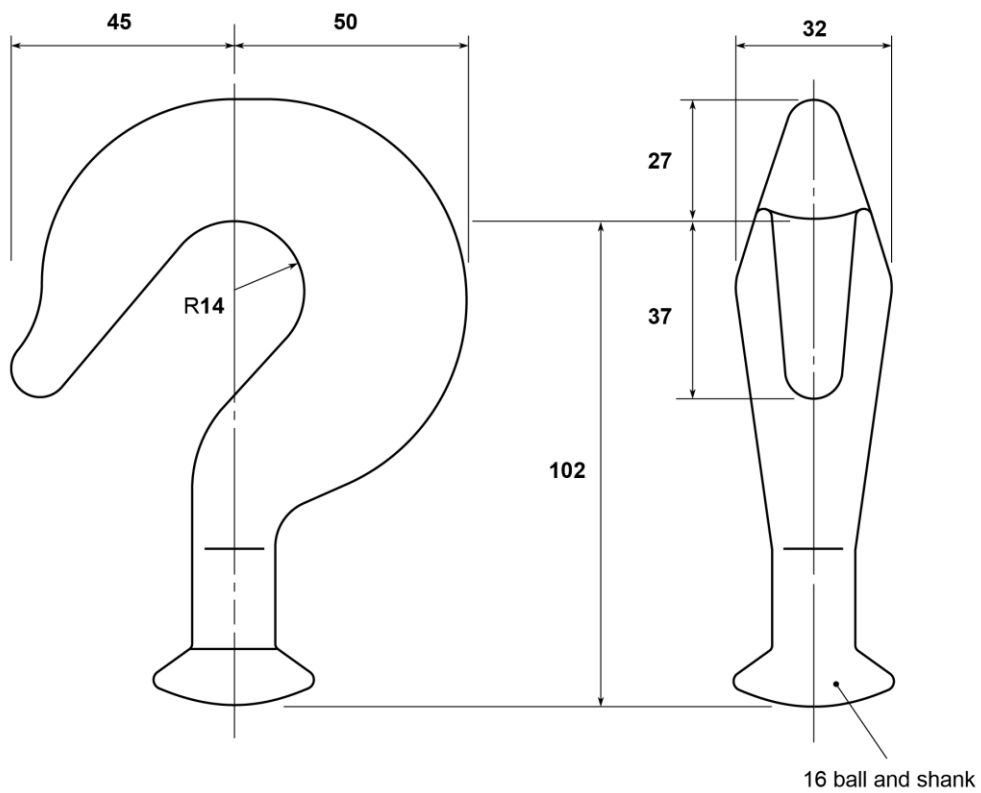


CC 111244

STEELWORK
LV D-IRON

Change information for this issue
N/A

Appears in
ES400S11



CC 122298

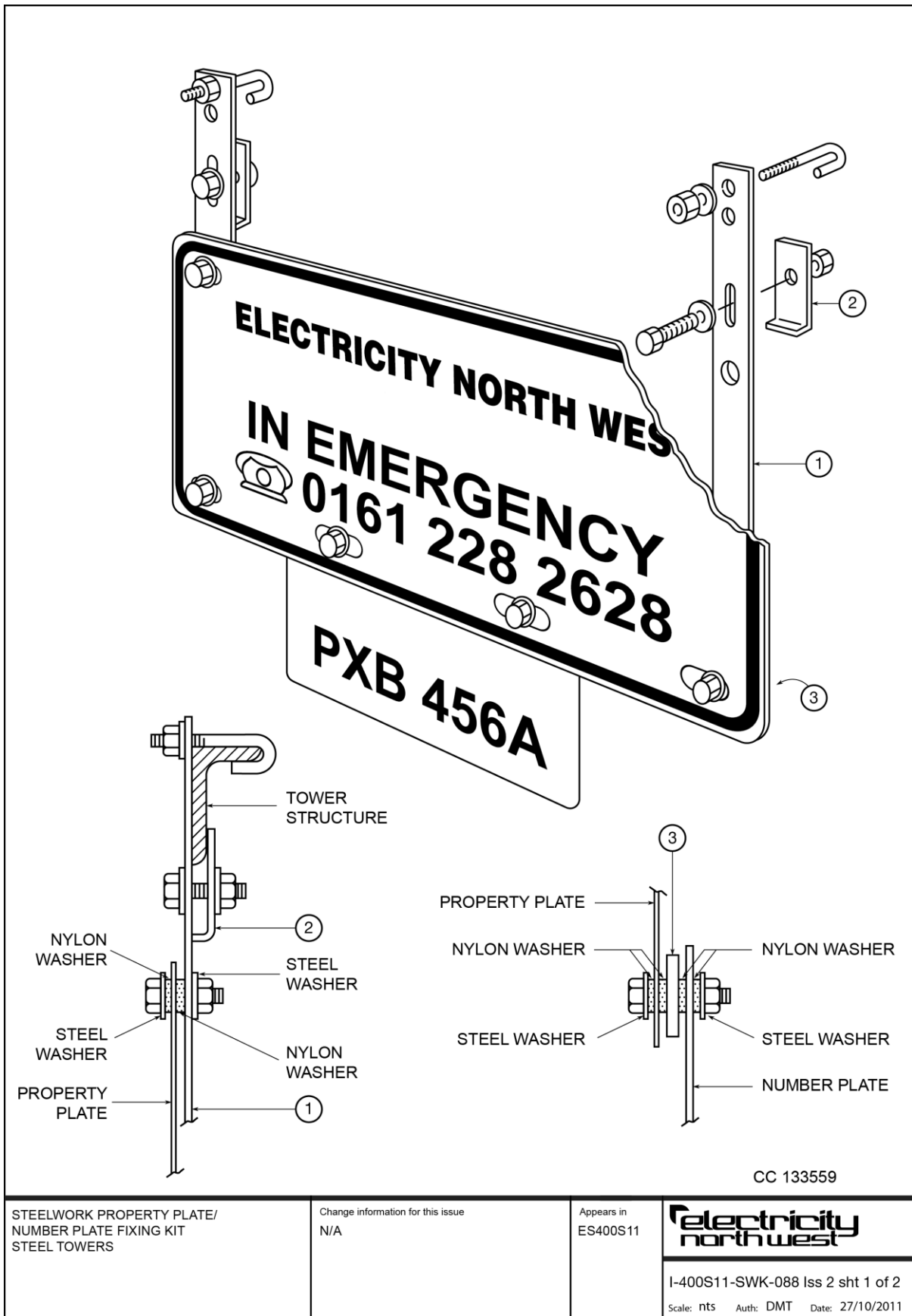
STEELWORK
BALL ENDED HOOK
15 / 81

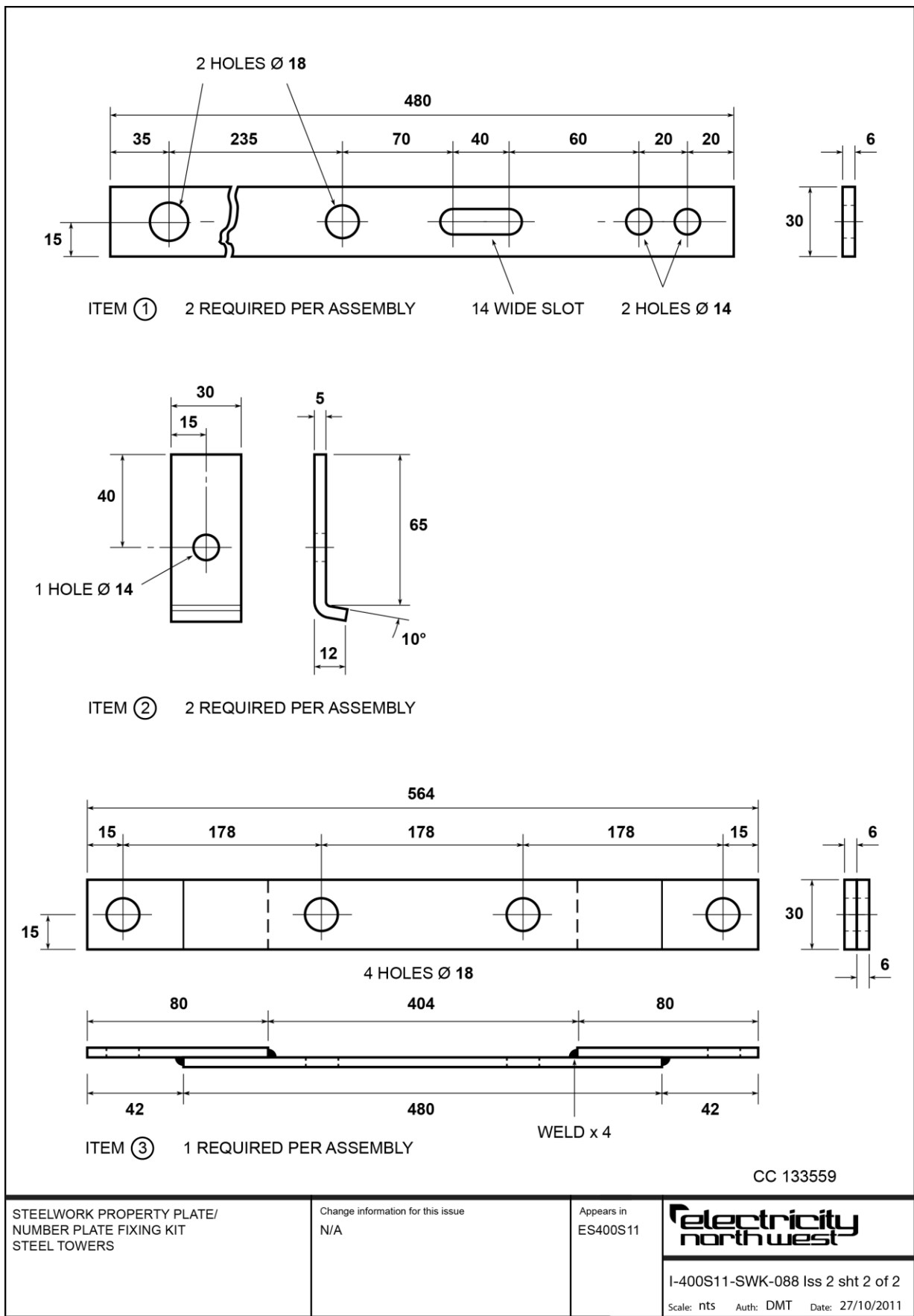
Change information for this issue
N/A

Appears in
ES400S11



I-400S11-SWK-087 Iss 1 sht 1 of 1
Scale: nts Auth: DMT Date: 27/10/2011

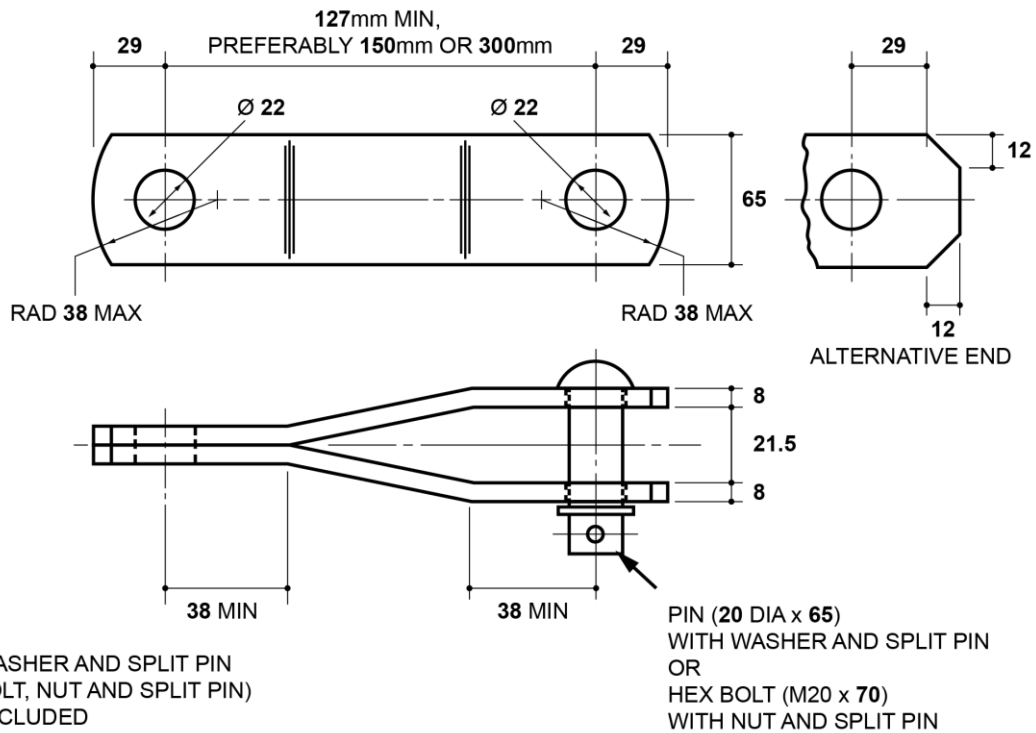




STEELWORK, PROPERTY PLATE/NUMBER PLATE FIXING KIT, STEEL TOWERS

Description	Drawing No: I-400S11-SWK-088		
	ES Ref No	CC number	Quantity
Steelwork, angle bracket, safety-sign fixing kit * (Dwg I-400S11-SWK-088, item (2))	ES400S11	133570	2
Bolt, M12, length 35mm, thread length 35mm, galvanized, c/w hex full nut	ES400F1	-	2
Bolt, M16, length 50mm, thread length 50mm, galvanized, c/w hex full nut	ES400F1	-	6
Bolt, J, M12, length 130mm, thread length 95mm, galvanized, c/w hex full nut	ES400F1	-	2
Steelwork, strap, property plate/number plate fixing kit * (Dwg I-400S11-SWK-088, item (1))	ES400S11	-	2
Steelwork, strap, property plate/number plate fixing kit * (Dwg I-400S11-SWK-088, item (3))	ES400S11	-	1
Washer, round, flat, 14mm hole, outer dia 24mm, thickness 2.5mm, galvanized	ES400F1	992968	6
Washer, round, flat, 18mm hole, outer dia 30mm, thickness 3mm, galvanized	ES400F1	992992	12
Washer, round, flat, 17mm hole, outer dia 30mm, thickness 3.0mm, nylon	-	-	16

* Materials shall be to BS EN 10025 grade FE430A or equivalent and galvanized to BS EN ISO 1461 or equivalent. Galvanized steelwork shall be free from sharp edges or points left by the galvanization process.



CC 109593

STEELWORK
CRANKED LINKS
28 / 87

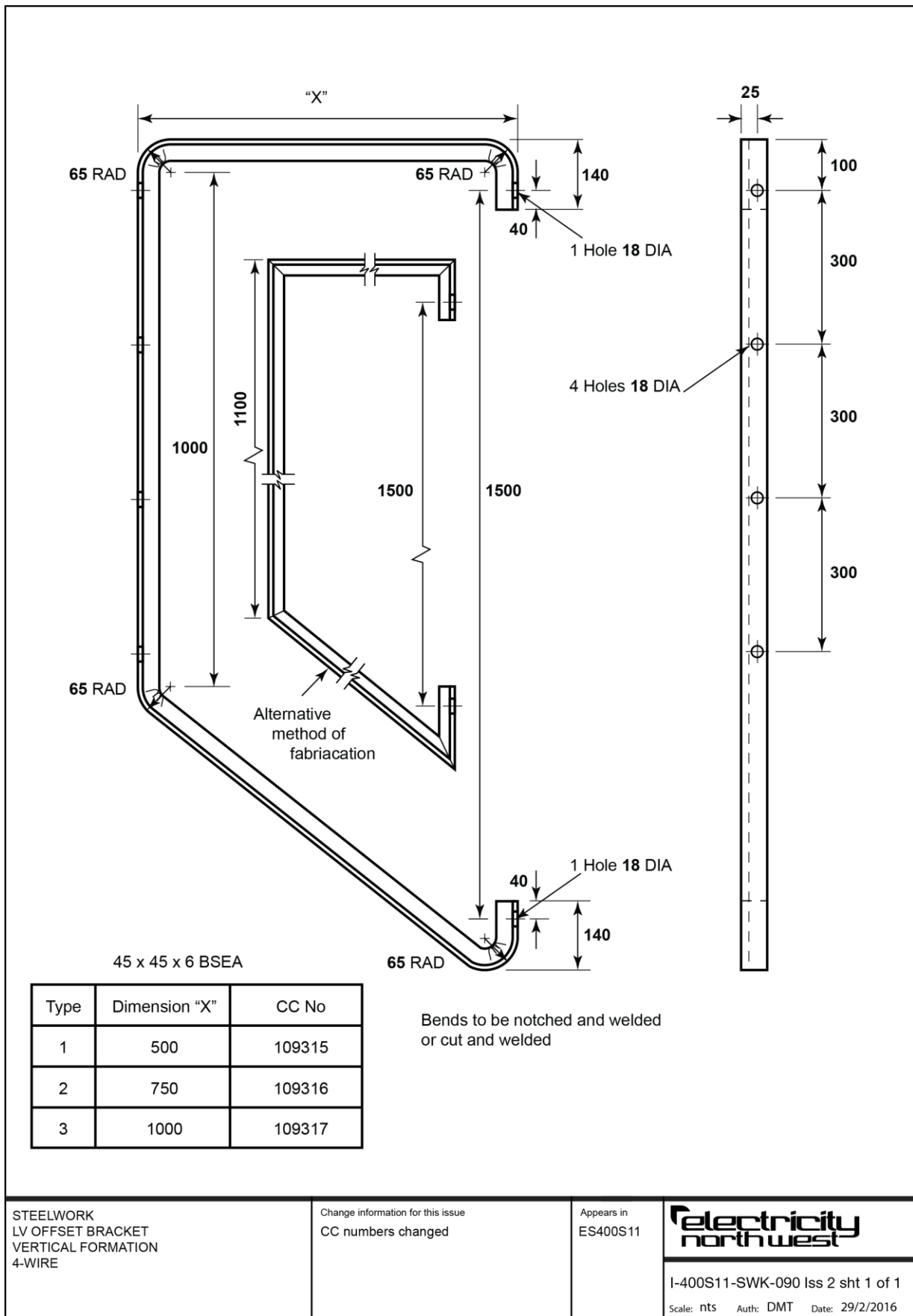
Change information for this issue
N/A

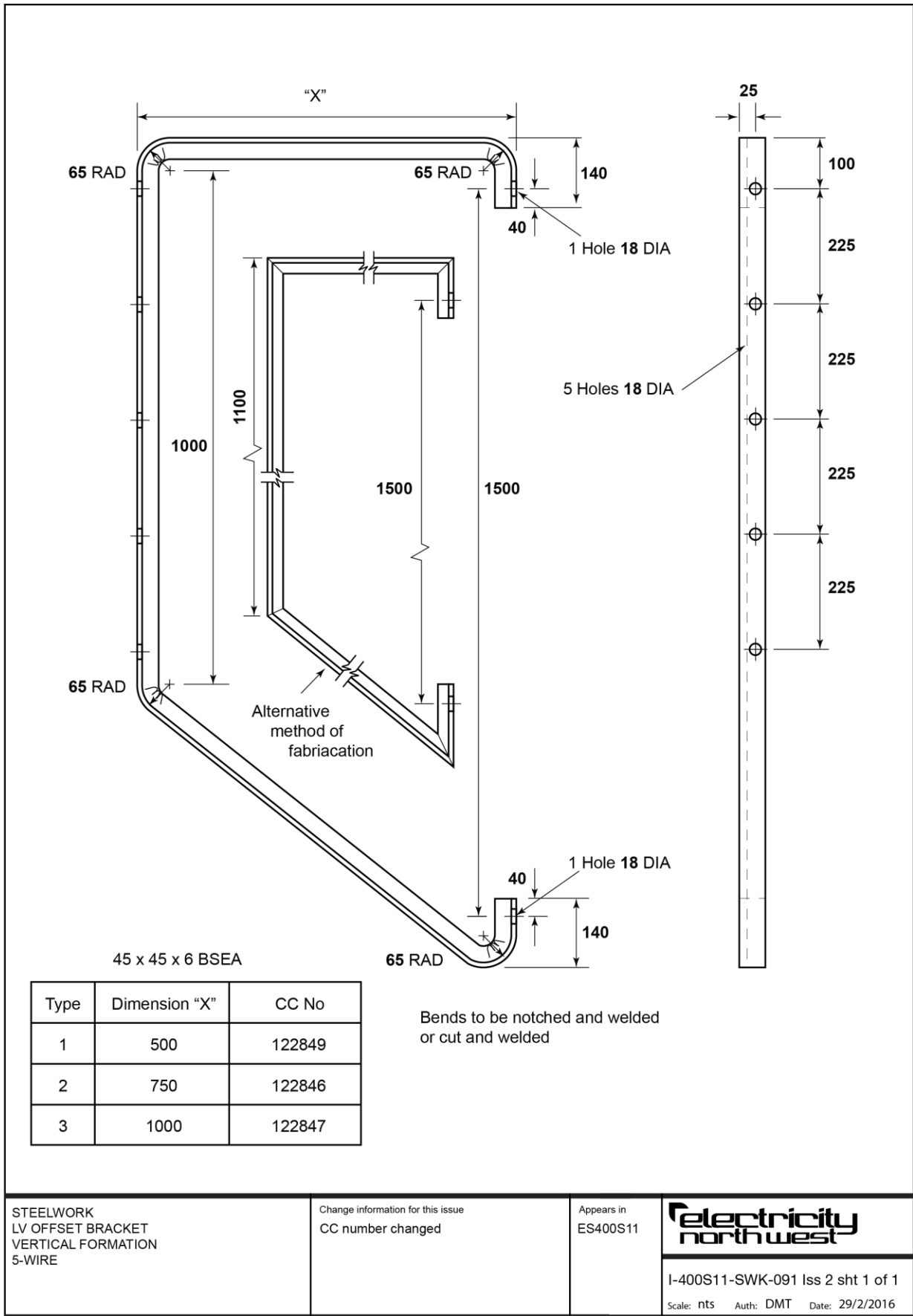
Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-089 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011

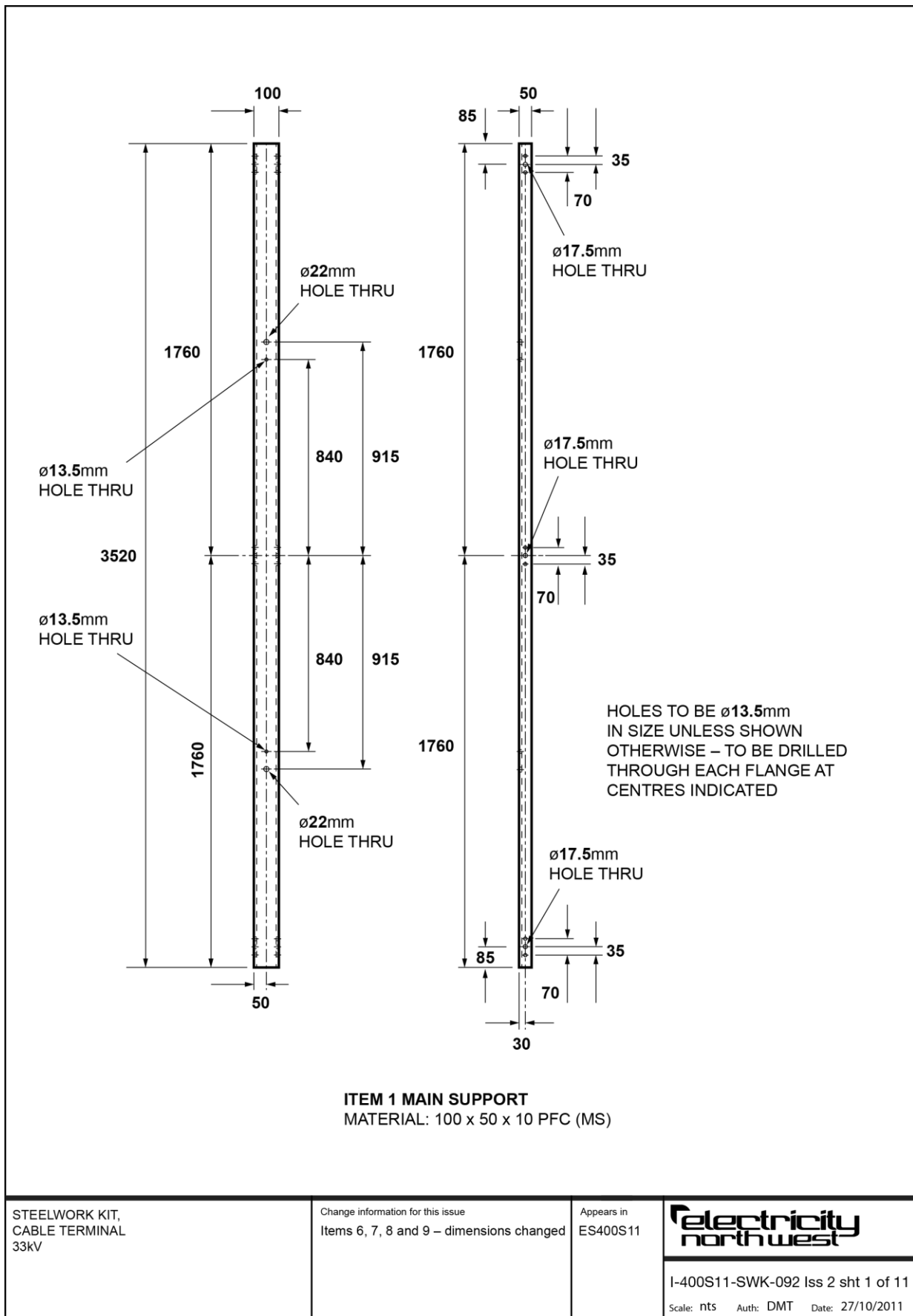


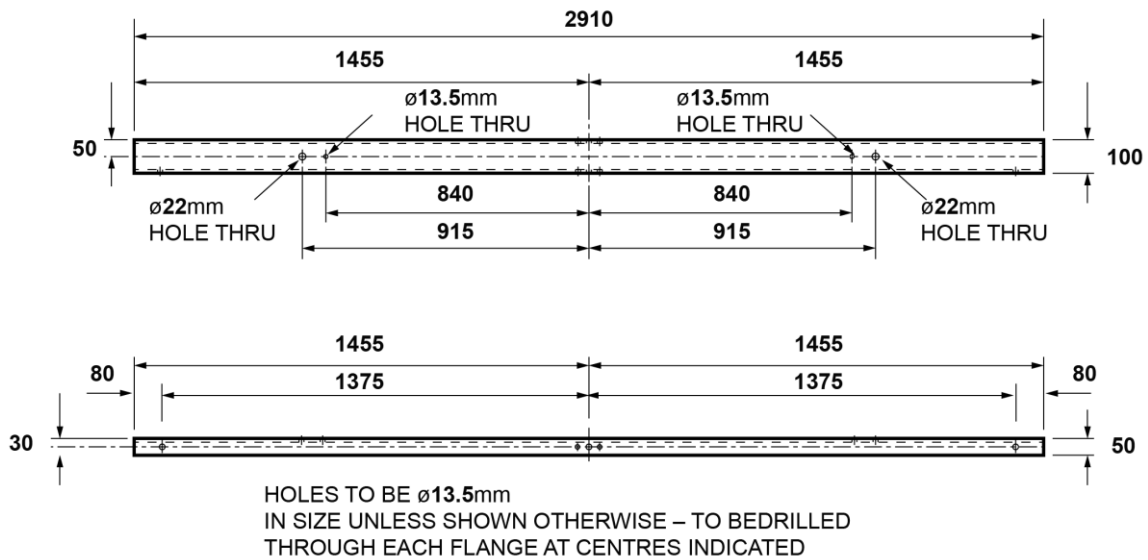


STEELWORK
LV OFFSET BRACKET
VERTICAL FORMATION
5-WIRE

Change information for this issue
CC number changed

Appears in
ES400S11





ITEM 2 CABLE SUPPORT
MATERIAL: 100 x 50 x 10 PFC (MS)

STEELWORK KIT,
CABLE TERMINAL
33kV

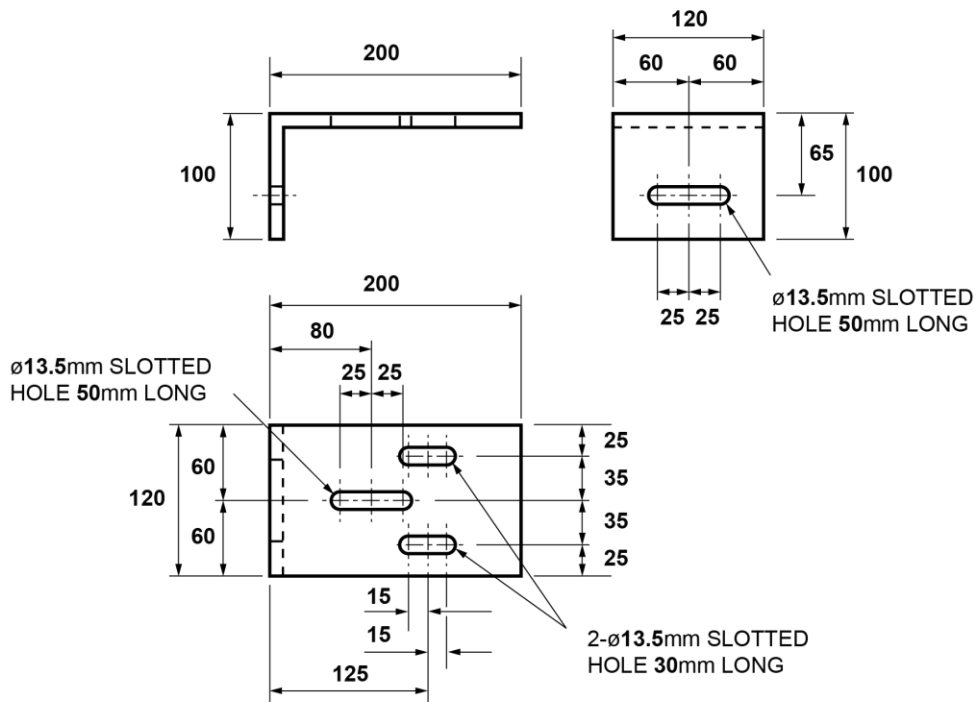
Change information for this issue
Items 6, 7, 8 and 9 – dimensions changed

Appears in
ES400S11

Electricity north west

I-400S11-SWK-092 Iss 2 sht 2 of 11

Scale: nts Auth: DMT Date: 27/10/2011



ITEM 3 SEALING END MOUNTING BRACKET
MATERIAL: 200 x 100 x 10 UEA (MS)

STEELWORK KIT
CABLE TERMINAL
33kV

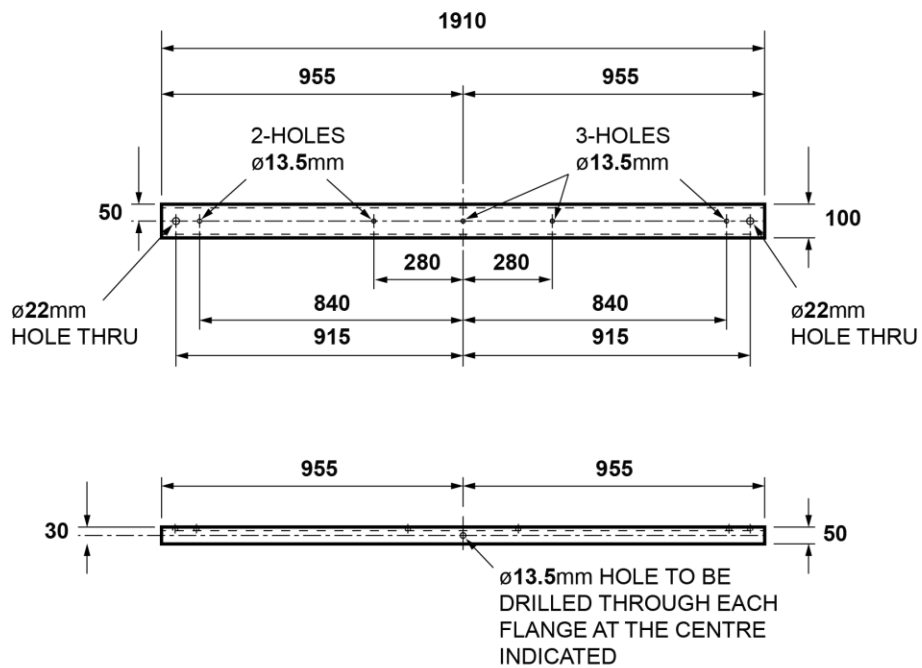
Change information for this issue
Items 6, 7, 8 and 9 – dimensions changed

Appears in
ES400S11

electricity north west

I-400S11-SWK-092 Iss 2 sht 3 of 11

Scale: nts Auth: DMT Date: 27/10/2011



ITEM 4 CABLE SUPPORT
MATERIAL: 100 x 50 x 10 PFC (MS)

STEELWORK KIT
CABLE TERMINAL
33kV

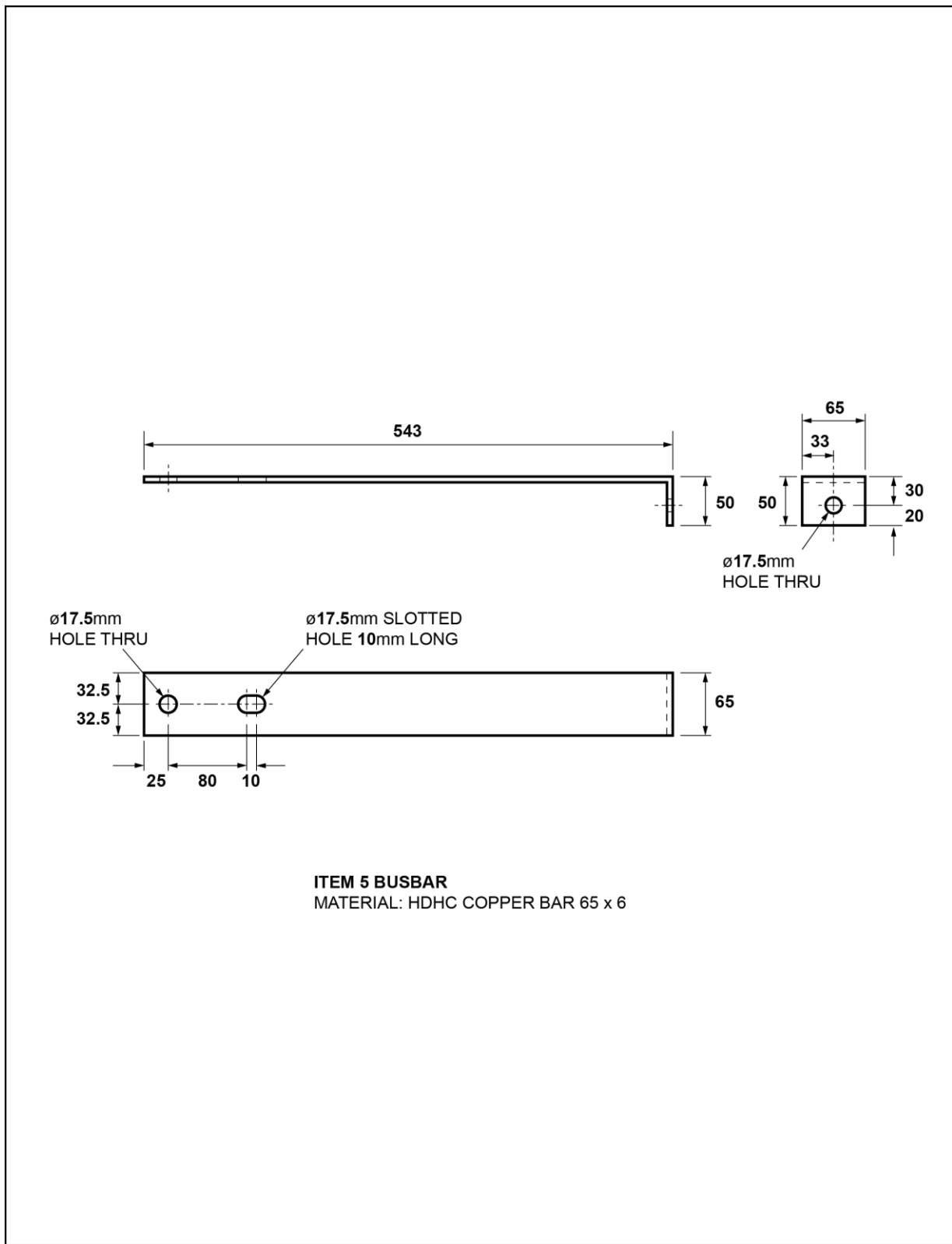
Change information for this issue
Items 6, 7, 8 and 9 – dimensions changed

Appears in
ES400S11

**Electricity
north west**

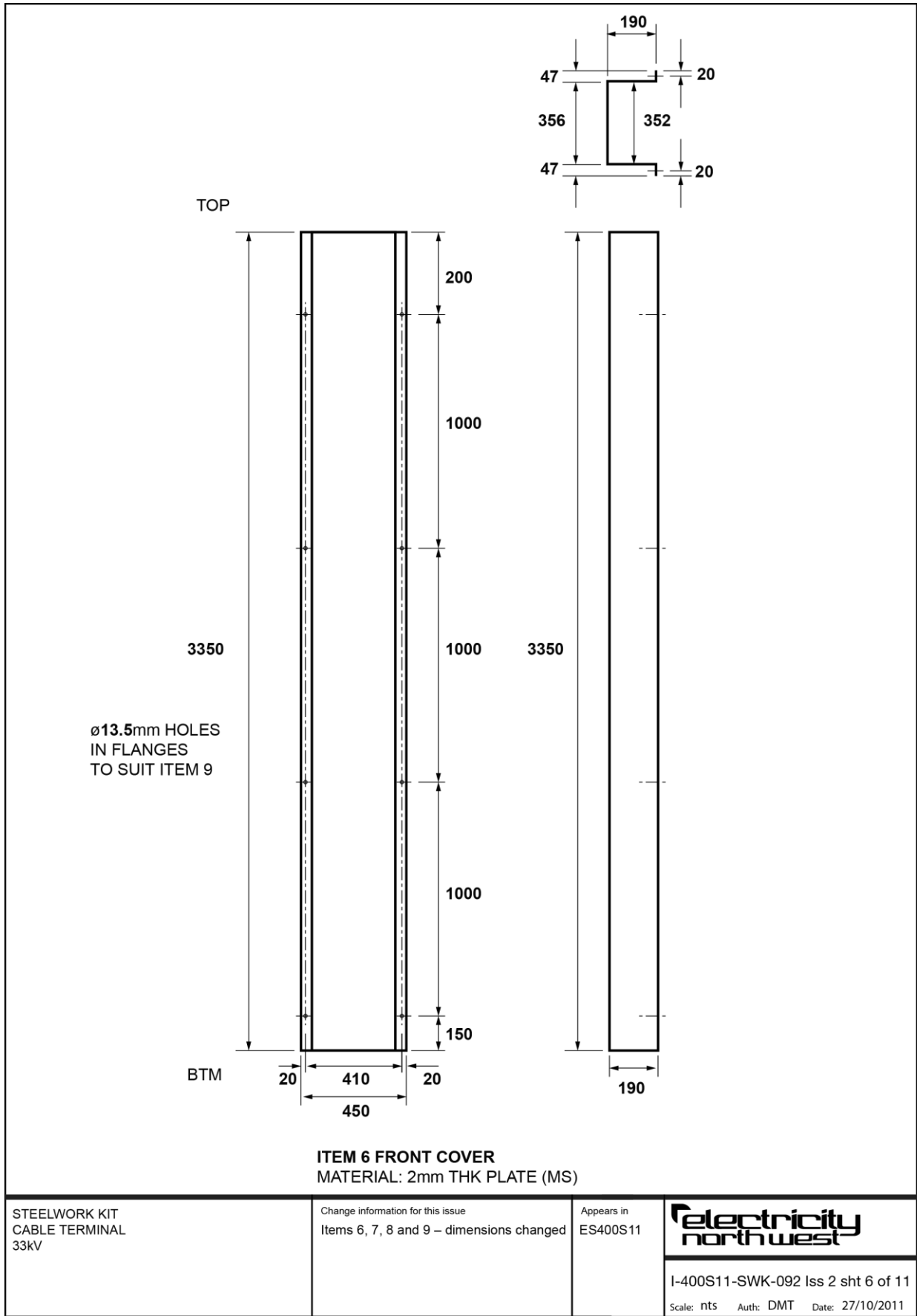
I-400S11-SWK-092 Iss 2 sht 4 of 11

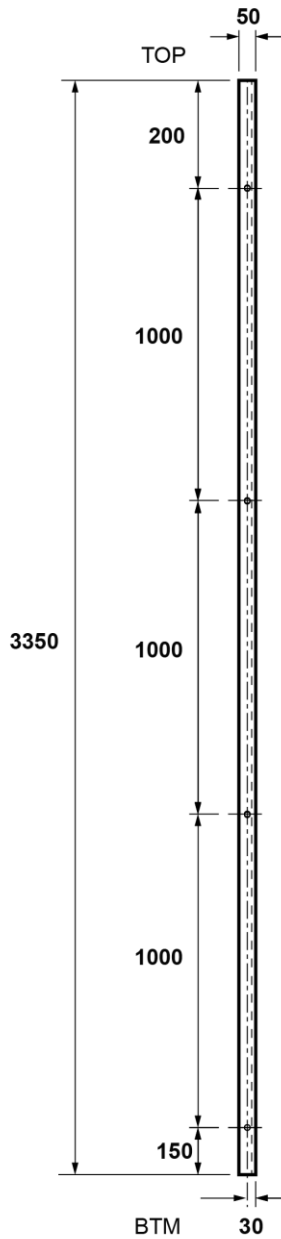
Scale: nts Auth: DMT Date: 27/10/2011



ITEM 5 BUSBAR
MATERIAL: HDHC COPPER BAR 65 x 6

<p>STEELWORK KIT CABLE TERMINAL 33kV</p>	<p>Change information for this issue Items 6, 7, 8 and 9 – dimensions changed</p>	<p>Appears in ES400S11</p>	<p>electricity north west I-400S11-SWK-092 Iss 2 sht 5 of 11 Scale: nts Auth: DMT Date: 27/10/2011</p>
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ITEM 7 MAIN SUPPORTING ANGLE
MATERIAL: 2 No. 50x50x6 EA (MS)

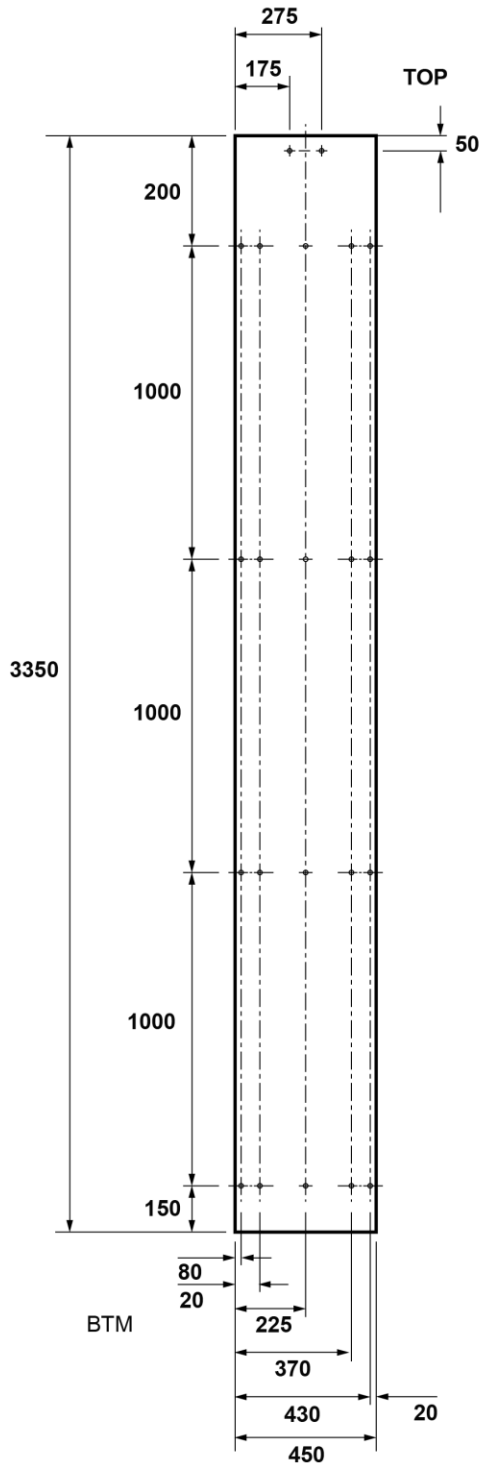
STEELWORK KIT
CABLE TERMINAL
33kV

Change information for this issue
Items 6, 7, 8 and 9 – dimensions changed

Appears in
ES400S11



I-400S11-SWK-092 Iss 2 sht 7 of 11
Scale: nts Auth: DMT Date: 27/10/2011



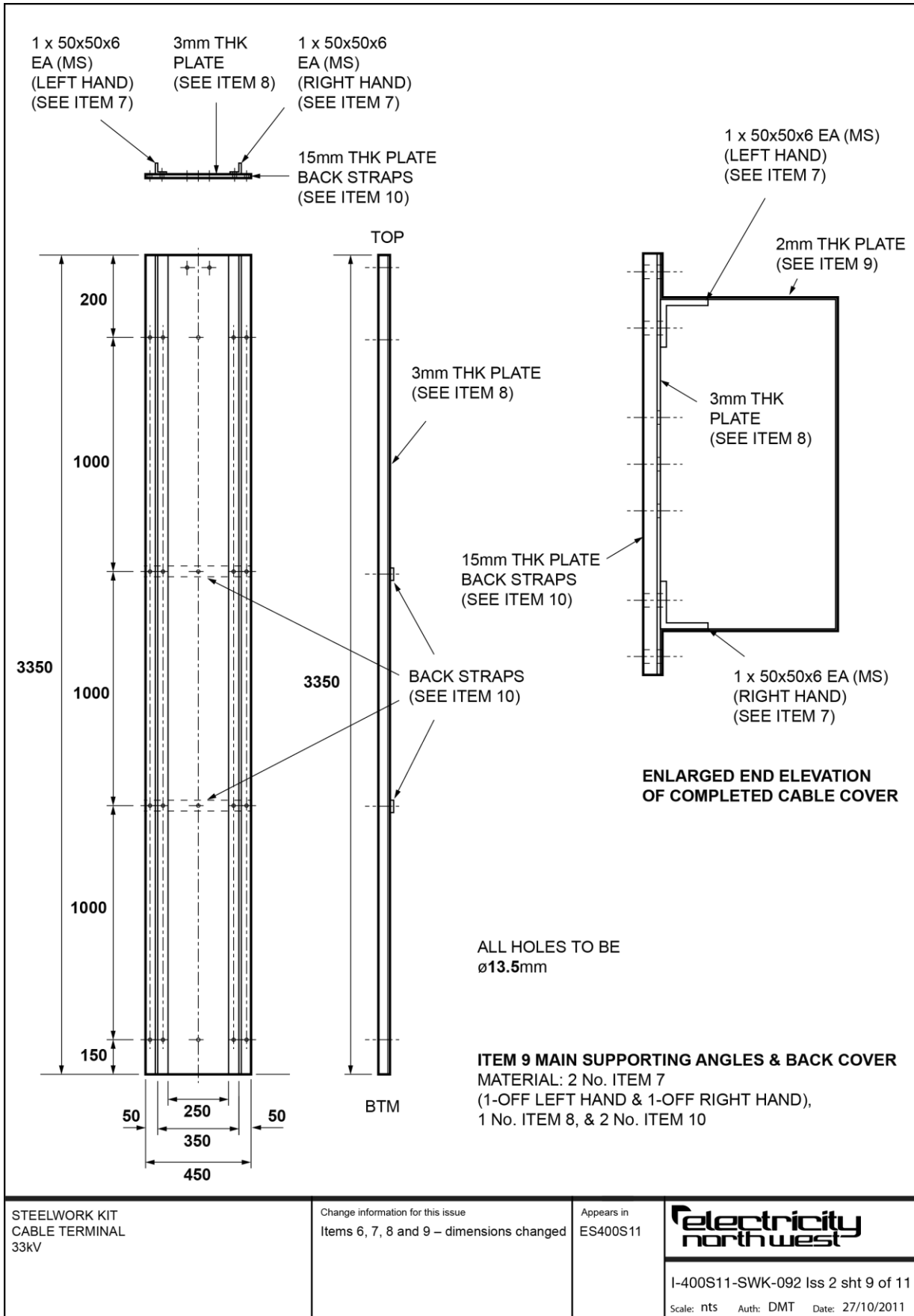
ALL HOLES TO BE
ø13.5mm

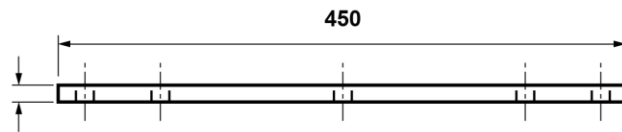
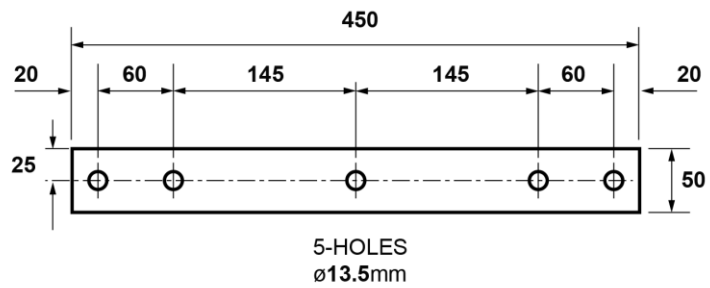
ITEM 8 BACK COVER
MATERIAL: 3mm THK PLATE (MS)

STEELWORK KIT
CABLE TERMINAL
33kV

Change information for this issue
Items 6, 7, 8 and 9 – dimensions changed

Appears in
ES400S11



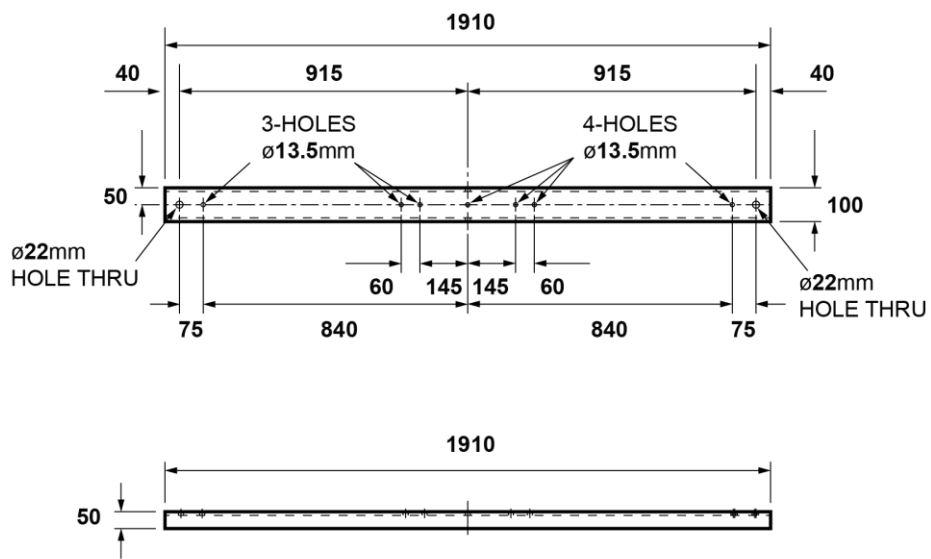


ITEM 10 BACK STRAP
MATERIAL: 15mm THK PLATE (MS)

STEELWORK KIT
CABLE TERMINAL
33kV

Change information for this issue
Items 6, 7, 8 and 9 – dimensions changed

Appears in
ES400S11



ITEM 11 CABLE SUPPORT
MATERIAL: 100 x 50 x 10 PFC (MS)

STEELWORK KIT
CABLE TERMINAL
33KV

Change information for this issue
Items 6, 7, 8 and 9 – dimensions changed

Appears in
ES400S11

electricity north west

I-400S11-SWK-092 Iss 2 sht 11 of 11

Scale: nts Auth: DMT Date: 27/10/2011

**STEELWORK KIT, CABLE TERMINAL, 33KV
(CC 122848)**

Drawing No: I-400S11-SWK-092

Description	Qty
Item 1, main support (Dwg I-400S11-SWK-092-0111)	2
Item 2, cable support (Dwg I-400S11-SWK-092-0211)	1
Item 3, sealing end mounting bracket (Dwg I-400S11-SWK-092-0311)	7
Item 4, cable support (Dwg I-400S11-SWK-092-0411)	3
Item 5, busbar (Dwg I-400S11-SWK-092-0511) *	3
Item 6, front cover (Dwg I-400S11-SWK-092-0611) **	1
Item 7, main supporting angle, left-hand (Dwg I-400S11-SWK-092-0711) **	1
Item 7, main supporting angle, right-hand (Dwg I-400S11-SWK-092-0711) **	1
Item 8, back cover (Dwg I-400S11-SWK-092-0811) **	1
Item 9 (Dwg I-400S11-SWK-092-0911) – assembly drawing of ** items	-
Item 10, back strap (Dwg I-400S11-SWK-092-1011) **	2
Item 11, cable support (Dwg I-400S11-SWK-092-1111)	2

* The copper busbars shall comply with ES400C30.

** Item 9 is an assembly drawing showing how the following items fit together: 6, 7, 8, 10.

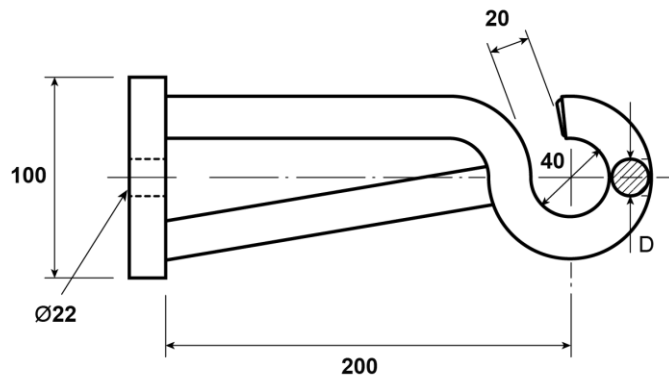
Schedule of nuts, bolts, set screws and washers

(The following items shall be supplied with the kit, and shall comply generally with ES400F1.)

Reference (to above items)	Qty	Bolts			Each bolt/set screw to be supplied with
		Dia	Length	Thread Length	
1-Pole-1	2	M20	375	150	Nut, locknut and round washer
Pole- -2, -4, -11	10	M20	375	150	Nut, locknut and square curved washer
Pole-11	2	M20	450	150	Nut and round washer
Set screws					
1, 2, 4-3	10	M12	40	22	Nut and round washer
11-7, 8, 9	4	M12	40	22	Nut and round washer
7, 8, 9, 10	4	M12	50	22	Nut and round washer
6-9, 11	4	M12	35	22	Nut and round washer
6-9, 10	4	M12	45	22	Nut and round washer
5†	6	M16	40	26	Stainless steel nut and round washer

Drawing No: I-400S11-SWK-092

Description		Qty
Cable cleat (not shown)	14	Set screw, M12, 70mm long
		Continued...
Continued...		
<p>† Bolt sets in accordance with BS4190 galvanized:</p> <p>High tensile bolt sets complete with palnuts, comprising:</p> <ul style="list-style-type: none"> 1 x bolt (grade S355JR) 1 x full hex head nut (grade 275JR) 1 x 4mm thick washer (grade 275JR) 1 x palnut (grade 275JR) <p>High tensile bolt sets complete with locknuts, comprising:</p> <ul style="list-style-type: none"> 1 x bolt (grade S355JR) 1 x full hex head nut (grade 275JR) 1 x 4mm thick washer (grade 275JR) 1 x full hex head locknut (grade 275JR) <p>General notes:</p> <ol style="list-style-type: none"> 1. MS is mild steel, grade S275JR to BS EN 10025. 2. All steelwork to be check erected prior to galvanizing and site delivery. 3. All steelwork to be galvanized. 		



D = 16 or 20

STEELWORK
OUTRIGGER HOOK
22mm HOLE
POLE
ABC

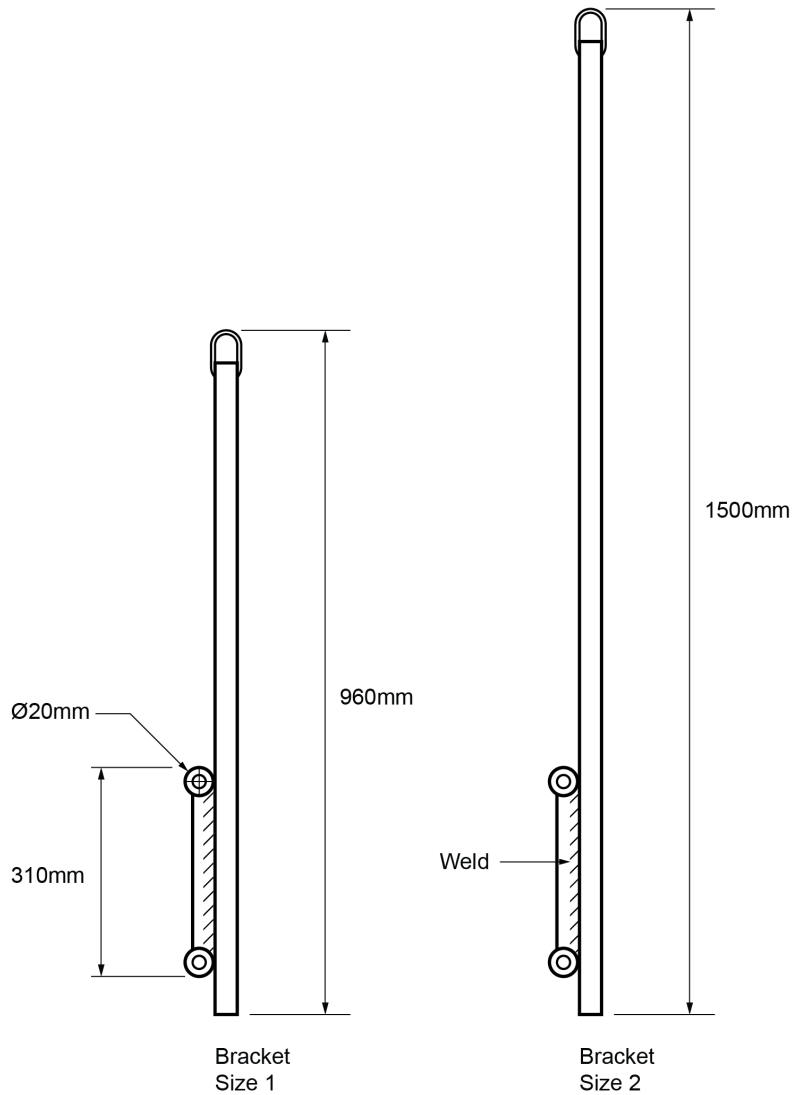
Change information for this issue
N/A

Appears in
ES400S11

electricity north west

I-400S11-SWK-093 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 27/10/2011

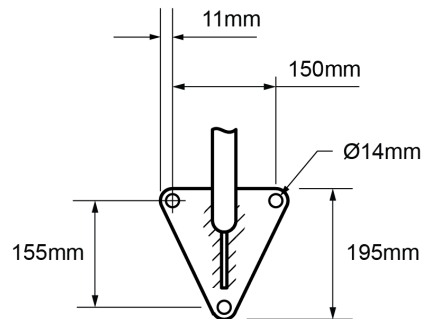


Note
This bracket is supplied with an attached movable eye that can take an approved helical dead end.

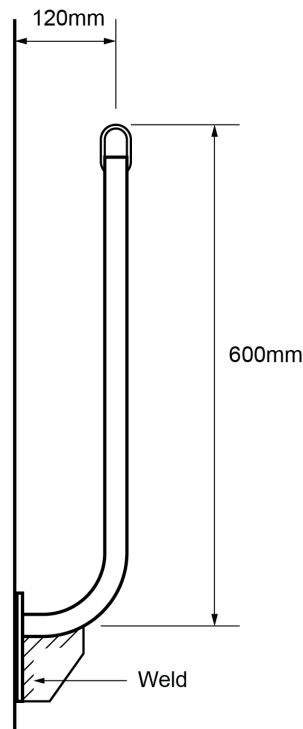
STEELWORK
LV SERVICE
POLE TOP EXTENSION BRACKET

Change information for this issue
N/A

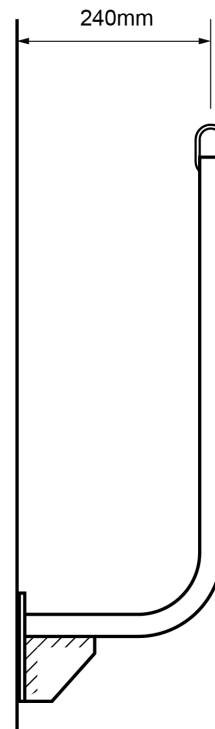
Appears in
ES400S11



View on the Bracket



Bracket
Size 1



Bracket
Size 2

Note

This bracket is supplied with an attached movable eye that can take an approved helical dead end.

STEELWORK
LV SERVICE
UNDER EAVES EXTENSION BRACKET

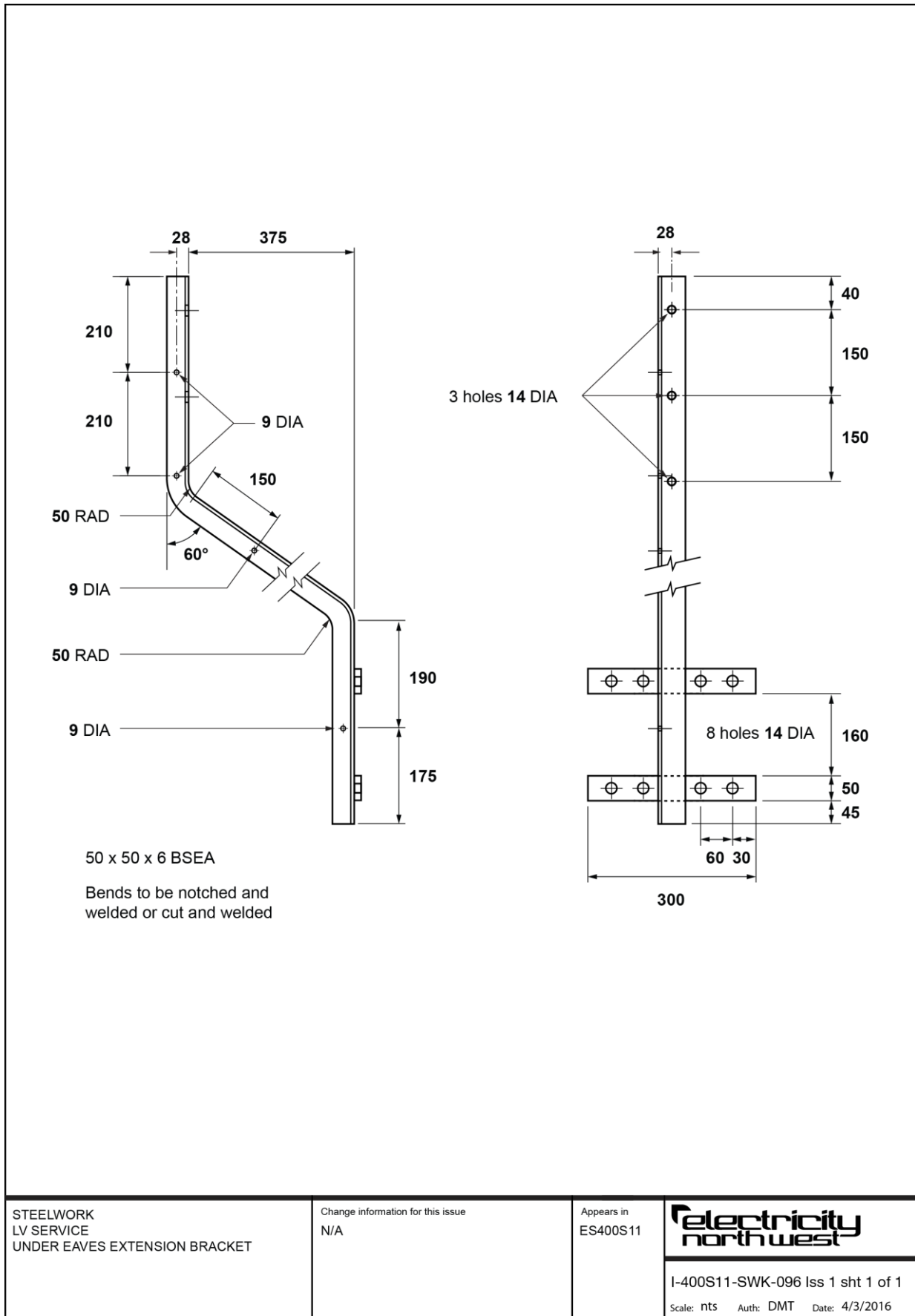
Change information for this issue
N/A

Appears in
ES400S11

**Electricity
north west**

I-400S11-SWK-095 Iss 1 sht 1 of 1

Scale: nts Auth: DMT Date: 04/10/12



STEELWORK
LV SERVICE
UNDER EAVES EXTENSION BRACKET

Change information for this issue
N/A

Appears in
ES400S11

Electricity north west

I-400S11-SWK-096 Iss 1 sht 1 of 1
Scale: nts Auth: DMT Date: 4/3/2016

Appendix B – Schedules of OHL Steelwork Per Line Type

B1 Steelwork for LV ABC Lines (Lines Constructed to ENA TS ES400O4)

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, outrigger hook, 22mm hole, pole, ABC	I-400S11-SWK-091 (ENA TS 43-14, Fig. 5)	ES400O4	110221
Steelwork, stay plate, light duty (Dwg I-400S11-SWK-085)	I-400S11-SWK-085 (ENA TS 43-91: Dwg 439110)	ES400O4 ENA TS 43-30	129194
Steelwork, transformer platform kit, single pole (Dwg I-400S11-SWK-018)	I-400S11-SWK-018 (ENA TS 43-95: Dwg 439523)	ES400O2 ES400O3 ES400O4	* 133396
Steelwork, wall bracket, 3 legs (Dwg I-400S11-077)	I-400S11-SWK-077 (Electricity North West development)	ES400O4 LV Services	110396
Steelwork, wall mounting, hook plate (LV ABC service clamps)	Not drawn	ES400O4 LV Services	110389

- CC number for the kit. If individual items are required, identify them by the drawing sheet numbers, e.g. I-400S11-SWK-015-25-2, I-400S11-SWK-015-55-2.

B2 Steelwork for LV Vertical - Formation (Lines Constructed to ENA TS 43-50)

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, LV D-iron (Dwg I-400S11-SWK-086)	I-400S11-SWK-086 (ENA TS 43-95)	ENA TS 43-30	111244
Steelwork, LV offset bracket, vertical formation, 4-wire, 500mm	I-400S11-SWK-090 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	109315
Steelwork, LV offset bracket, vertical formation, 4-wire, 750mm	I-400S11-SWK-090 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	109316
Steelwork, LV offset bracket, vertical formation, 4-wire, 1000mm	I-400S11-SWK-090 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	109317
Steelwork, LV offset bracket, vertical formation, 5-wire, 500mm	I-400S11-SWK-091 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	122849
Steelwork, LV offset bracket, vertical formation, 5-wire, 750mm	I-400S11-SWK-091 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	122846
Steelwork, LV offset bracket, vertical formation, 5-wire, 1000mm	I-400S11-SWK-091 (ENA TS 43-95: Fig. 8)	ENA TS 43-30	122847
Steelwork, stay plate, light duty (Dwg I-400S11-SWK-085)	I-400S11-SWK-085 (ENA TS 43-91: Dwg 439110)	ES 40004 ENA TS 43-30	129194

B3 Steelwork for LV Services

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, LV service, pole top extension bracket, size 1, 4kN MFL	I-400S11-SWK-094 (Electricity North West development)	ES400O4	122842
Steelwork, LV service, pole top extension bracket, size 2, 4kN MFL	I-400S11-SWK-094 (Electricity North West development)	ES400O4	122843
Steelwork, LV service, under eaves extension bracket, size 1, 4kN MFL	I-400S11-SWK-095 (Electricity North West development)	ES400O4	122844
Steelwork, LV service, under eaves extension bracket, size 2, 4kN MFL	I-400S11-SWK-095 (Electricity North West development)	ES400O4	122845
Steelwork, LV service, under eaves extension bracket	I-400S11-SWK-096 (Electricity North West development)	ES400O4	122851
Steelwork, wall bracket, 3 legs (Dwg I-400S11-077)	I-400S11-SWK-077 (Electricity North West development)	ES400O4 LV Services	110396
Steelwork, wall bracket, corner (Dwg I-400S11-SWK-084)	I-400S11-SWK-084 (ENA TS 43-95)	LV Services	110397
Steelwork, wall bracket, flat (Dwg I-400S11-SWK-083)	I-400S11-SWK-083 (ENA TS 43-95)	LV Services	110398
Steelwork, wall mounting, hook plate (LV ABC service clamps)	Not drawn	ES400O4 LV Services	110389

B4 Steelwork for Covered-Conductor Lines Constructed to ES400O2

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork kit, cable terminal, 33kV	I-400S11-SWK-092 (Electricity North West development)	ES400O2 ES400O3	122848
Steelwork, ball clevis (Dwg I-400S11-SWK-013)	I-400S11-SWK-013 (BS 3288-2: 1990)	ES400O2	122114
Steelwork, ball ended hook, 15/81 (Dwg I-400S11-SWK-087)	I-400S11-SWK-087 (BS 3288-2: 1990)	ES400O2 ES400O3	122298
Steelwork, crossarm strut (tie strap) (Dwg I-400S11-SWK-005)	I-400S11-SWK-005 (ENA TS 43-95: Dwg 439526)	ES400O2 ES400O3	133353
Steelwork, crossarm, 4.1m (Dwg I-400S11-SWK-035)	I-400S11-SWK-035 (ENA TS 43-95: Dwg 439521)	ES400O2 ES400O3	133221
Steelwork, crossarm, H-pole, straight line section/angle section (Dwg I-400S11-SWK-003)	I-400S11-SWK-003 (ENA TS 43-95: Dwg 439564)	ES400O2	133202
Steelwork, crossarm, H-pole, terminal (Dwg I-400S11-SWK-004)	I-400S11-SWK-004 (ENA TS 43-95: Dwg 439565)	ES400O2	133203
Steelwork, crossarm, jumper support (Dwg I-400S11-SWK-028)	I-400S11-SWK-028 (Electricity North West development)	ES400O2 ES400O3	133615
Steelwork, crossarm, single pole, intermediate/pin angle/straight line section/angle section (Dwg I-400S11-SWK-001)	I-400S11-SWK-001 (ENA TS 43-95: Dwg 439562)	ES400O2	133200
Steelwork, crossarm, single pole, terminal (Dwg I-400S11-SWK-002)	I-400S11-SWK-002 (ENA TS 43-95: Dwg 439563)	ES400O2	133201
Steelwork, fall-arrest anchor point, pole (Dwg I-400S11-SWK-026)	I-400S11-SWK-026 (Electricity North West development)	ES400O2 ES400O3 ENA TS 43-50	260820
Steelwork, foundation brace, H-pole (pole centres 1830mm) (Dwg I-400S11-SWK-017)	I-400S11-SWK-017 (ENA TS 43-95: Dwg 439558)	ES400O2 ES400O3	111325
Steelwork, foundation brace, H-pole (pole centres 2500mm) (Dwg I-400S11-SWK-034)	I-400S11-SWK-034 (ENA TS 43-95: Dwg 439559)	ES400O2 ES400O3	111320

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, insulator pin, 11kV (10kN) (Dwg I-400S11-SWK-006)	I-400S11-SWK-006 (BS 3288)	ES400O2 ES400O3	128252
Steelwork, insulator pin, 33kV (10kN) (Dwg I-400S11-SWK-007)	I-400S11-SWK-007 (BS 3288)	ES400O2 ES400O3	128104
Steelwork, links, long kit (Dwg I-400S11-SWK-016)	I-400S11-SWK-016 (Electricity North West development)	ES400O2 ES400O3	* 133206
Steelwork, links, short kit (Dwg I-400S11-SWK-015)	I-400S11-SWK-015 (Electricity North West development)	ES400O2 ES400O3	* 133207
Steelwork, pilot pin (Dwg I-400S11-SWK-011)	I-400S11-SWK-011 (BS 3288-2: 1990)	ES400O2 ES400O3	128376
Steelwork, sag variation link (universal) (Dwg I-400S11-SWK-012)	I-400S11-SWK-012 (Electricity North West development)	ES400O2 ES400O3	260850
Steelwork, section strap (Dwg I-400S11-SWK-008)	I-400S11-SWK-008 (ENA TS 43-95: Dwg 439525)	ES400O2 ES400O3	133345
Steelwork, socket clevis, 15/84 (Dwg I-400S11-SWK-014)	I-400S11-SWK-014 (BS 3288-2: 1990)	ES400O2	122173
Steelwork, socket thimble, conductors under 13mm outer diameter (Dwg I-400S11-SWK-032)	I-400S11-SWK-032 (Electricity North West development)	ES400O2 ES400O3	132234
Steelwork, socket thimble, conductors over 13mm outer diameter (Dwg I-400S11-SWK-033)	I-400S11-SWK-033 (Electricity North West development)	ES400O2 ES400O3	132233
Steelwork, stay plate, heavy duty, kit (Dwg I-400S11-SWK-029)	I-400S11-SWK-029 (Electricity North West development)	ES400O2 ES400O3	260840
Steelwork, terminal strap (Dwg I-400S11-SWK-009)	I-400S11-SWK-009 (ENA TS 43-95: Dwg 439528)	ES400O2 ES400O3	133361
Steelwork, thimble, open-ended, stay (Dwg I-400S11-SWK-075)	I-400S11-SWK-075 (ENA TS 43-91)	All wood pole lines	132241
Steelwork, transformer platform kit, H-pole (Dwg I-400S11-SWK-019)	I-400S11-SWK-019 (ENA TS 43-95: Dwg 439524)	ES400O2 ES400O3	* 133213

03/08/21

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, transformer platform kit, single pole (Dwg I-400S11-SWK-018)	I-400S11-SWK-018 (ENA TS 43-95: Dwg 439523)	ES400O2 ES400O3 ES400O4	* 133396

- CC number for the kit. If individual items are required, identify them by the drawing sheet numbers, eg I-400S11-SWK-015-25-2, I-400S11-SWK-015-55-2.

B5 Steelwork for Bare-Wire Lines Constructed to ES400O3

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork kit, cable terminal, 33kV	I-400S11-SWK-092 (Electricity North West development)	ES400O2 ES400O3	122848
Steelwork, ball ended hook, 15/81 (Dwg I-400S11-SWK-087)	I-400S11-SWK-087 (BS 3288-2: 1990)	ES400O2 ES400O3	122298
Steelwork, bracket, pilot pin (Dwg I-400S11-SWK-020)	I-400S11-SWK-020 (Not applicable)	ES400O3	111457
Steelwork, crossarm brace, diagonal (Dwg I-400S11-SWK-024)	I-400S11-SWK-024 (ENA TS 43-95: Dwg 439515)	ES400O3	133335
Steelwork, crossarm strut (tie strap) (Dwg I-400S11-SWK-005)	I-400S11-SWK-005 (ENA TS 43-95: Dwg 439526)	ES400O2 ES400O3	133353
Steelwork, crossarm, 4.1m (Dwg I-400S11-SWK-035)	I-400S11-SWK-035 (ENA TS 43-95: Dwg 439521)	ES400O2 ES400O3	133221
Steelwork, crossarm, jumper support (Dwg I-400S11-SWK-028)	I-400S11-SWK-028 (Electricity North West development)	ES400O2 ES400O3	133615
Steelwork, crossarm, single pole, intermediate/pin angle (Dwg I-400S11-SWK-021)	I-400S11-SWK-021 (ENA TS 43-95: Dwg 439519)	ES400O3	133310
Steelwork, crossarm, single pole, straight line section/angle section and H-pole angle section up to 60° (Dwg I-400S11-SWK-022)	I-400S11-SWK-022 (ENA TS 43-95: Dwg 439520)	ES400O3	133329
Steelwork, crossarm, single pole/H-pole, terminal (Dwg I-400S11-SWK-023)	I-400S11-SWK-023 (ENA TS 43-95: Dwg 439522)	ES400O3	* 133337
Steelwork, fall-arrest anchor point, pole (Dwg I-400S11-SWK-026)	I-400S11-SWK-026 (Electricity North West development)	ES400O2 ES400O3 ENA TS 43-50	260820
Steelwork, foundation brace, H-pole (pole centres 1830mm) (Dwg I-400S11-SWK-017)	I-400S11-SWK-017 (ENA TS 43-95: Dwg 439558)	ES400O2 ES400O3	111325
Steelwork, foundation brace, H-pole (pole centres 2500mm) (Dwg I-400S11-SWK-034)	I-400S11-SWK-034 (ENA TS 43-95: Dwg 439559)	ES400O2 ES400O3	111320

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, insulator bracket (top hat) (Dwg I-400S11-SWK-025)	I-400S11-SWK-025 (ENA TS 43-95: Dwg 439518)	ES400O3	133302
Steelwork, insulator pin, 11kV (10kN) (Dwg I-400S11-SWK-006)	I-400S11-SWK-006 (BS 3288)	ES400O2 ES400O3	128252
Steelwork, insulator pin, 33kV (10kN) (Dwg I-400S11-SWK-007)	I-400S11-SWK-007 (BS 3288)	ES400O2 ES400O3	128104
Steelwork, links, long kit (Dwg I-400S11-SWK-016)	I-400S11-SWK-016 (Electricity North West development)	ES400O2 ES400O3	* 133206
Steelwork, links, short kit (Dwg I-400S11-SWK-015)	I-400S11-SWK-015 (Electricity North West development)	ES400O2 ES400O3	* 133207
Steelwork, pilot pin (Dwg I-400S11-SWK-011)	I-400S11-SWK-011 (BS 3288-2: 1990)	ES400O2 ES400O3	128376
Steelwork, sag variation link (universal) (Dwg I-400S11-SWK-012)	I-400S11-SWK-012 (Electricity North West development)	ES400O2 ES400O3	260850
Steelwork, section strap (Dwg I-400S11-SWK-008)	I-400S11-SWK-008 (ENA TS 43-95: Dwg 439525)	ES400O2 ES400O3	133345
Steelwork, socket thimble, conductors under 13mm outer diameter (Dwg I-400S11-SWK-032)	I-400S11-SWK-032 (Electricity North West development)	ES400O2 ES400O3	132234
Steelwork, socket thimble, conductors over 13mm outer diameter (Dwg I-400S11-SWK-033)	I-400S11-SWK-033 (Electricity North West development)	ES400O2 ES400O3	132233
Steelwork, stay plate, heavy duty, kit (Dwg I-400S11-SWK-029)	I-400S11-SWK-029 (Electricity North West development)	ES400O2 ES400O3	260840
Steelwork, terminal strap (Dwg I-400S11-SWK-009)	I-400S11-SWK-009 (ENA TS 43-95: Dwg 439528)	ES400O2 ES400O3	133361
Steelwork, thimble, open-ended, stay (Dwg I-400S11-SWK-075)	I-400S11-SWK-075 (ENA TS 43-91)	All wood pole lines	132241
Steelwork, transformer platform kit, H-pole (Dwg I-400S11-SWK-019)	I-400S11-SWK-019 (ENA TS 43-95: Dwg 439524)	ES400O2 ES400O3	* 133213

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Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, transformer platform kit, single pole (Dwg I-400S11-SWK-018)	I-400S11-SWK-018 (ENA TS 43-95: Dwg 439523)	ES40002 ES40003 ES40004	* 133396

- CC number for the kit. If individual items are required, identify them by the drawing sheet numbers.

B6 Steelwork for 132kV Trident Lines Constructed to ENA TS 43-50

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, angle bracket support, insulator (132kV wood pole line) (Dwg I-400S11-SWK-044)	I-400S11-SWK-044 (ENA TS 43-95: Fig. 38)	ENA TS 43-50	122800
Steelwork, ball ended eyelink, insulator, 15/30 (Dwg I-400S11-SWK-078)	I-400S11-SWK-078 (BS 3288-2: 1990)	ENA TS 43-50 Steel tower TBA	122841
Steelwork, ball ended eyelink, 28/30 (Dwg I-400S11-SWK-069)	I-400S11-SWK-069 (ENA TS 43-91: Dwg 439108, J)	ENA TS 43-50 Steel tower TBA	122827
Steelwork, ball ended eyelink, 42/30 (Dwg I-400S11-SWK-070)	I-400S11-SWK-070 (ENA TS 43-91: Dwg 439108, J)	ENA TS 43-50 Steel tower TBA	122828
Steelwork, cable support, crossarm 'A', cable terminal (132kV wood pole line) (Dwg I-400S11-SWK-056)	I-400S11-SWK-056 (ENA TS 43-95: Fig. 50)	ENA TS 43-50	122803
Steelwork, cable support, crossarm 'B', cable terminal (132kV wood pole line) (Dwg I-400S11-SWK-057)	I-400S11-SWK-057 (ENA TS 43-95: Fig. 51)	ENA TS 43-50	122804
Steelwork, cranked links, 28/87 (Dwg I-400S11-SWK-089)	I-400S11-SWK-089 (BS 3288: 1990)	ENA TS 43-50	109593
Steelwork, channel support, 132kV sealing ends and surge diverters (132kV wood pole line) (Dwg I-400S11-SWK-052)	I-400S11-SWK-052 (ENA TS 43-95: Fig. 46)	ENA TS 43-50	122805
Steelwork, crossarm attachment plate, downlead (132kV wood pole line) (Dwg I-400S11-SWK-049)	I-400S11-SWK-049 (ENA TS 43-95: Fig. 43)	ENA TS 43-50	122808
Steelwork, crossarm brace, diagonal (132kV wood pole line) (Dwg I-400S11-SWK-048)	I-400S11-SWK-048 (ENA TS 43-95: Fig. 42)	ENA TS 43-50	122809
Steelwork, crossarm strut, 2.0m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-040)	I-400S11-SWK-040 (ENA TS 43-95: Fig. 34)	ENA TS 43-50	122812
Steelwork, crossarm strut, 2.5m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-041)	I-400S11-SWK-041 (ENA TS 43-95: Fig. 35)	ENA TS 43-50	122813
Steelwork, crossarm support channel (132kV wood pole line) (Dwg I-400S11-SWK-039)	I-400S11-SWK-039 (ENA TS 43-95: Fig. 33)	ENA TS 43-50	122814

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, crossarm tie strap, 2.0m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-042)	I-400S11-SWK-042 (ENA TS 43-95: Fig. 36)	ENA TS 43-50	122815
Steelwork, crossarm tie strap, 2.5m crossarm (132kV wood pole line) (Dwg I-400S11-SWK-043)	I-400S11-SWK-043 (ENA TS 43-95: Fig. 37)	ENA TS 43-50	122816
Steelwork, crossarm, angle/terminal (132kV wood pole line) (Dwg I-400S11-SWK-038)	I-400S11-SWK-038 (ENA TS 43-95: Fig. 32)	ENA TS 43-50	122811
Steelwork, crossarm, cable terminal, 2500mm centres (132kV wood pole line) (Dwg I-400S11-SWK-051)	I-400S11-SWK-051 (ENA TS 43-95: Fig. 45)	ENA TS 43-50	122810
Steelwork, crossarm, intermediate, 2.0m spacing (132kV wood pole line) (Dwg I-400S11-SWK-036)	I-400S11-SWK-036 (ENA TS 43-95: Fig. 30)	ENA TS 43-50	122806
Steelwork, crossarm, intermediate, 2.5m spacing (132kV wood pole line) (Dwg I-400S11-SWK-037)	I-400S11-SWK-037 (ENA TS 43-95: Fig. 31)	ENA TS 43-50	122807
Steelwork, earth attachment nut, temporary (132kV wood pole line) (Dwg I-400S11-SWK-058)	I-400S11-SWK-058 (ENA TS 43-95: Fig. 53)	ENA TS 43-50	122818
Steelwork, fall-arrest anchor point, pole (Dwg I-400S11-SWK-026)	I-400S11-SWK-026 (Electricity North West development)	ES400O2 ES400O3 ENA TS 43-50	260820
Steelwork, foundation brace, H-pole (132kV wood pole line) (Dwg I-400S11-SWK-050)	I-400S11-SWK-050 (ENA TS 43-95: Fig. 44)	ENA TS 43-50	122819
Steelwork, link, stay, 28/86 (132kV wood pole line) (Dwg I-400S11-SWK-068)	I-400S11-SWK-068 (Electricity North West development)	ENA TS 43-50	122829
Steelwork, mounting plate, insulator (132kV wood pole line) (Dwg I-400S11-SWK-045)	I-400S11-SWK-045 (ENA TS 43-95: Fig. 39)	ENA TS 43-50	122822
Steelwork, section strap, long type (132kV wood pole line) (Dwg I-400S11-SWK-047)	I-400S11-SWK-047 (ENA TS 43-95: Fig. 41)	ENA TS 43-50	122825
Steelwork, section strap, short type (132kV wood pole line) (Dwg I-400S11-SWK-046)	I-400S11-SWK-046 (ENA TS 43-95: Fig. 40)	ENA TS 43-50	122824

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, shackle, insulator, 15/29 (Dwg I-400S11-SWK-074)	I-400S11-SWK-074 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	133204
Steelwork, shackle, 28/29 (Dwg I-400S11-SWK-066)	I-400S11-SWK-066 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122830
Steelwork, shackle, 42/29 (Dwg I-400S11-SWK-067)	I-400S11-SWK-067 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122831
Steelwork, shackle, 42/29A (Dwg I-400S11-SWK-067)	I-400S11-SWK-067 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122832
Steelwork, socket clevis, 28/31 (Dwg I-400S11-SWK-073)	I-400S11-SWK-073 (BS 3288-2: 1990)	ENA TS 43-50	109594
Steelwork, socket tongue, stay, 28/36A (132kV wood pole line) (Dwg I-400S11-SWK-072)	I-400S11-SWK-072 (ENA TS 43-91: Dwg 439108, K)	ENA TS 43-50	122834
Steelwork, stay strap, heavy duty (132kV wood pole line) (Dwg I-400S11-SWK-065)	I-400S11-SWK-065 (ENA TS 43-91: Dwg 439113)	ENA TS 43-50	122835
Steelwork, support plate, surge diverter (132kV wood pole line) (Dwg I-400S11-SWK-055)	I-400S11-SWK-055 (ENA TS 43-95: Fig. 49)	ENA TS 43-50	122840
Steelwork, support, cable cleats (132kV wood pole line) (Dwg I-400S11-SWK-054)	I-400S11-SWK-054 (ENA TS 43-95: Fig. 48)	ENA TS 43-50	122838
Steelwork, support, sealing end (132kV wood pole line) (Dwg I-400S11-SWK-053)	I-400S11-SWK-053 (ENA TS 43-95: Fig. 47)	ENA TS 43-50	122839
Steelwork, thimble, open-ended, stay (Dwg I-400S11-SWK-075)	I-400S11-SWK-075 (ENA TS 43-91)	All wood pole lines	132241
Steelwork, yoke plate, stay, 42/42 (132kV wood pole line) (Dwg I-400S11-SWK-071)	I-400S11-SWK-071 (ENA TS 43-91: Dwg 439108, H)	ENA TS 43-50	122836

B7 Steelwork for Existing Lines not Included Above (Repair Only)

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, crossarm, single pole, intermediate/pin angle (light duty) (Dwg I-400S11-SWK-080)	I-400S11-SWK-080 (ENA TS 43-95)	Repair only	133338
Steelwork, crossarm, single pole, section/section angle (light duty) (Dwg I-400S11-SWK-079)	I-400S11-SWK-079 (ENA TS 43-95)	Repair only	133339
Steelwork, crossarm, single pole, terminal (light duty) (Dwg I-400S11-SWK-081)	I-400S11-SWK-081 (ENA TS 43-95)	Repair only	133340
Steelwork, section strap (light duty) (Dwg I-400S11-SWK-082)	I-400S11-SWK-082 (BS3288-2)	Repair only	133663
Steelwork, stay outrigger bracket (Dwg I-400S11-SWK-076)	I-400S11-SWK-076 BEBS L1	Repair only	110399

B8 Ancillary Steelwork for Lattice Steel Towers

Approved Description (for purchasing and product labelling)	Drawing Reference (derived from)	Used in Spec:	CC number
Steelwork, ball ended eyelink, 28/30 (Dwg I-400S11-SWK-069)	I-400S11-SWK-069 (ENA TS 43-91: Dwg 439108, J)	ENA TS 43-50 Steel tower TBA	122827
Steelwork, ball ended eyelink, 42/30 (Dwg I-400S11-SWK-070)	I-400S11-SWK-070 (ENA TS 43-91: Dwg 439108, J)	ENA TS 43-50 Steel tower TBA	122828
Steelwork, ball ended eyelink, insulator, 15/30 (Dwg I-400S11-SWK-078)	I-400S11-SWK-078 (BS 3288-2: 1990)	ENA TS 43-50 Steel tower TBA	122841
Steelwork, ball ended hook, 15/32 (Dwg I-400S11-SWK-027)	I-400S11-SWK-027 (BS 3288-2: 1990)	Steel tower TBA	122297
Steelwork, clip, circuit colour plate (Dwg I-400S11-SWK-064)	I-400S11-SWK-064 (Electricity North West development)	Any steel tower	122817
Steelwork, helicopter-reference fixing kit, steel towers (Dwg I-400S11-SWK-031)	I-400S11-SWK-031 (Electricity North West development)	Any steel tower	122820
Steelwork, safety-sign fixing kit, steel towers (Dwg I-400S11-SWK-030)	I-400S11-SWK-030 (Electricity North West development)	Any steel tower	133558
Steelwork, property plate/number plate fixing kit, steel towers (Dwg I-400S11-SWK-088)	I-400S11-SWK-088 (Electricity North West development)	Any steel tower	133559
Steelwork, shackle, 28/29 (Dwg I-400S11-SWK-066)	I-400S11-SWK-066 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122830
Steelwork, shackle, 42/29 (Dwg I-400S11-SWK-067)	I-400S11-SWK-067 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122831
Steelwork, shackle, 42/29A (Dwg I-400S11-SWK-067)	I-400S11-SWK-067 (ENA TS 43-91: Dwg 439108, G)	ENA TS 43-50 Steel tower TBA	122832
Steelwork, shackle, insulator, 15/29 (Dwg I-400S11-SWK-074)	I-400S11-SWK-074 (BS 3288-2: 1990)	ENA TS 43-50 Steel tower TBA	133204

Appendix C – Conformance Declaration

SECTION-BY-SECTION CONFORMANCE WITH SPECIFICATION

The Tenderer shall declare conformance or otherwise for each product/service or range of products/services, section-by-section, using the following Conformance Declaration Codes.

Conformance Declaration Codes:

N/A =	Clause is not applicable/appropriate to the product/service.
C1 =	The product/service conforms fully with the requirements of this clause.
C2 =	The product/service conforms partially with the requirements of this clause.
C3 =	The product/service does not conform to the requirements of this clause.
C4 =	The product/service does not currently conform to the requirements of this clause, but the manufacturer proposes to modify and test the product in order to conform.

Manufacturer:

Product/Service Description:

Product/Service Reference:

Name:

Company:

Signature:

SECTION-BY-SECTION CONFORMANCE

Section	Section Topic	Conformance Declaration Code	Remarks * (must be completed if code is not C1)
4.1	Product not to be Changed		
4.2	Electricity North West Technical Approval		
4.3	Quality Assurance		
4.4	Formulation		
4.5	Identification Markings		
4.6	Minimum Life Expectancy		
4.7	Product Conformity		
4.8	Delivery		
4.9	Confirmation of Conformance		
5.1	Requirements for Type Tests at the Supplier's Premises		
5.2	Requirement for Routine Tests at the Supplier's Premises		
6.1	General		
6.2	Steelwork Finish		
6.3	Steelwork Marking		
6.4	Wire Staples		

*** Applicable specifications shall be stated in the Remarks column where alternatives are quoted within a section. The Remarks column shall also be used to indicate cases where the products or services exceed the quoted specifications.**

Additional Notes: