Gam Anak Ind. Co.

Power Transmission Lines

# Steel Latice & Tubular Poles

## For Electricity Distribution Networks

# INTRODUCTION

In today's world the amount of generation, transmission and consumption of electrical energy is one of the most important criteria of how developed a country is. Based on this fact, Gam Arak Industrial Company has started his activities in the field of electricity transmission from 1991 and till then has donated all its capabilities to actively participate in national and international development projects.

Now with a reference of valuable experiences of implementing more than 5000 km of Power Transmission Line projects, Gam is honoured to have a particular share in national and international markets.

Gam Arak Industrial Company, as an active international firm, has promoted its product list by adding such steel structures as Lattice and Tubular Poles used in electricity distribution networks and lighting poles in order to keep its clients satisfied in Iraq, Kurdistan Region of Iraq, Turkmenistan and Afghanistan.

9 and 11 meter steel lattice and tubular poles, produced for Iraq market, are being manufactured, galvanized and packed according to latest specification of Iraqi standards in different types and based on customer's requirement. These products have been type tested in international accredited test stations and got the related certificates.

The advantages of these products are their optimum weight, long lasting life and simple installation and maintenance as well as high safety.

By utilizing the most experienced and well trained personnel as well as modern pipe press and welding machineries and equipment, Gam Arak Industrial Company, is in a position to guarantee the quality of these products.

اليوم تعتبر كمية إنتاج واستهلاك وتصدير الطاقة الكهربائية، من أهم المؤشرات لتقييم التنمية في بلدان العالم.

وإنطلاقا مع هذه الرؤية، بدأت شركة "كام أراك" الصناعية نشاطاتها في مجال نقل الطاقة الكهربائية في عام ١٩٩١، وركزت جهودها على المشاركة في تنمية صناعة الكهرباء، على الصعيدين الوطني والدولي.

فسجل هذا الشركة يحفل بتأسيس أكثر من ٥٠٠٠ كيلومتر من الخطوط النقل الطاقة الكهربائية تتراوح طاقاتها الفولتية بين ٦٣ و٥٠٠ كيلوفولت، كما يزيدها فخراً، أنها تُعتبر الشركة الرائدة والسباقة ولها الدور الكبير والمؤثر، في تنمية صناعة نقل الطاقة الكهربائية في إيران و دوّل الجوار و الأسواق العالمية.

فشركة "كام أراك" بإعتبارها الشركة الناشطة في الأسواق الدولية، لجلب اعتماد زبائنها في أسواق العراق وتركمانستان وأفغانستان، تستكمل و تضاف منتجاتها بقوائم دائرية لتوزيع الطاقة الضغط العالي و اعمدة المدورة و المشبكة والإنارة.

فالاعمدة المدورة والمشبكة ذات ٩ أمتار و١١ متراً، تم تصميمها حسب المواصفات العراقية في انواع مختلفة ومتطابقة لآخر المواصفات المعتمدة في العراق، ويتم إنتاجها وغلفنتها واكمالها حاليا في إيران، ليتم إرسالها للعراق.

وقد نجحت شركة "كام أراك" في الحصول على إختبارات نوعية من المختبرات الدولية المعتبرة لتأييد إنتاجها حتى الآن.

فالوزن المطلوب وعمرها الطويل وسهولة نصبها، وإدامتها وتفوّق نسبة الأمان فيها، تُعتبر من أهم الميزات البارزة لهذه القوائم(الأبراج الدائرية الضغط العالي).

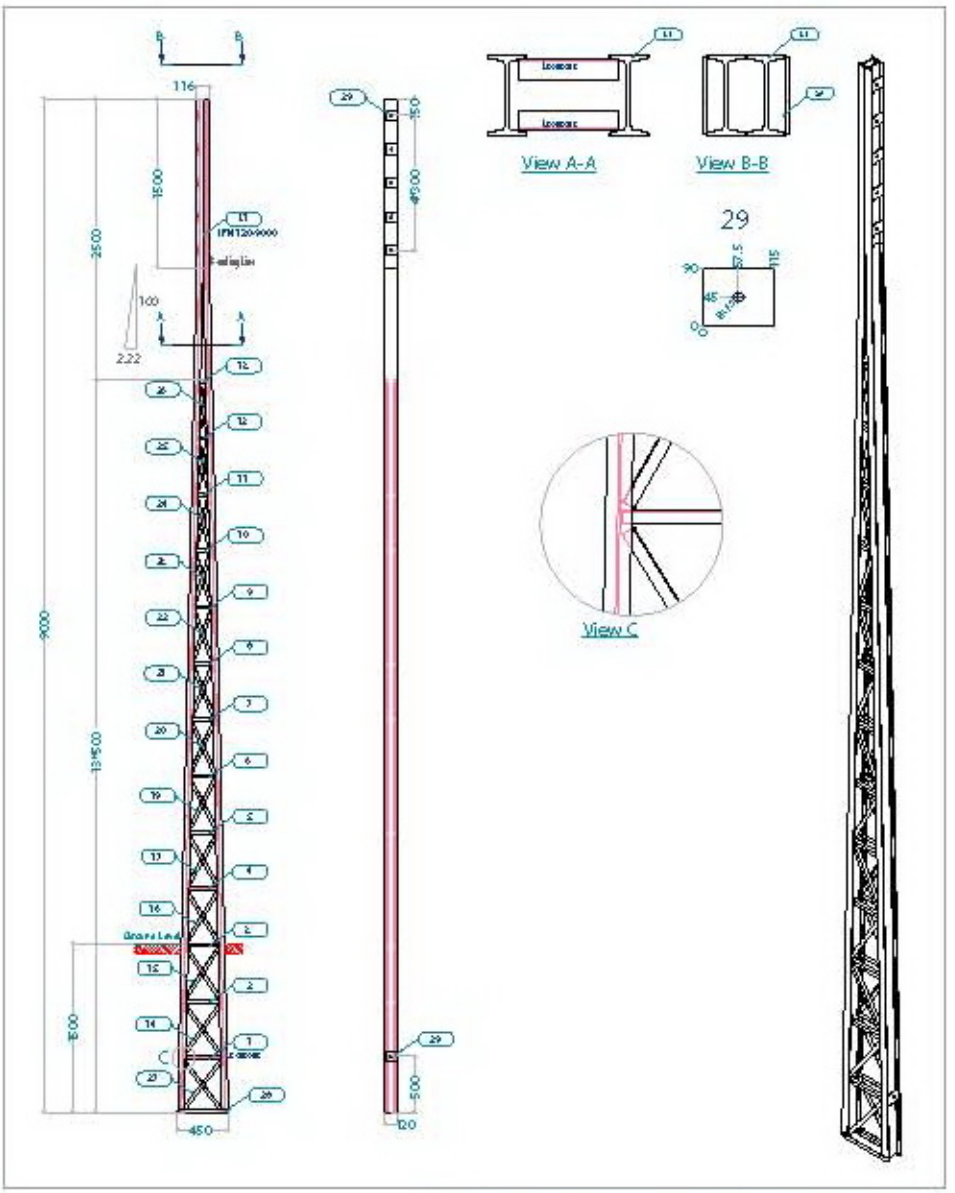
كما تمتاز شركة "كام أراك" بإستقطاب الطواقم المتدربة والمتعلمة وكذلك حيازة الأجهزة الآلية لكبس الأنابيب ولحامها، وضمان تقديم منتجاتها بجودة وصلابة أفضل في الأسواق.

ولأهمية الأسواق المُستقطبة للمنتجات ورغبة الزبائن، قدمت شركة "كام أراك" على إنشاء مصنع مستقل مزود بأحدث الأجهزة والتقنيات لإنتاج قوائم مدورة للضغط العالي و اعمدة مدورة ومشبكة للتوزيع والإنارة.

Considering the fact that, Iraq is one of Gam's major markets, we have developed an exclusive plant besides the main factory for manufacturing Steel Lattice and Tubular Poles.

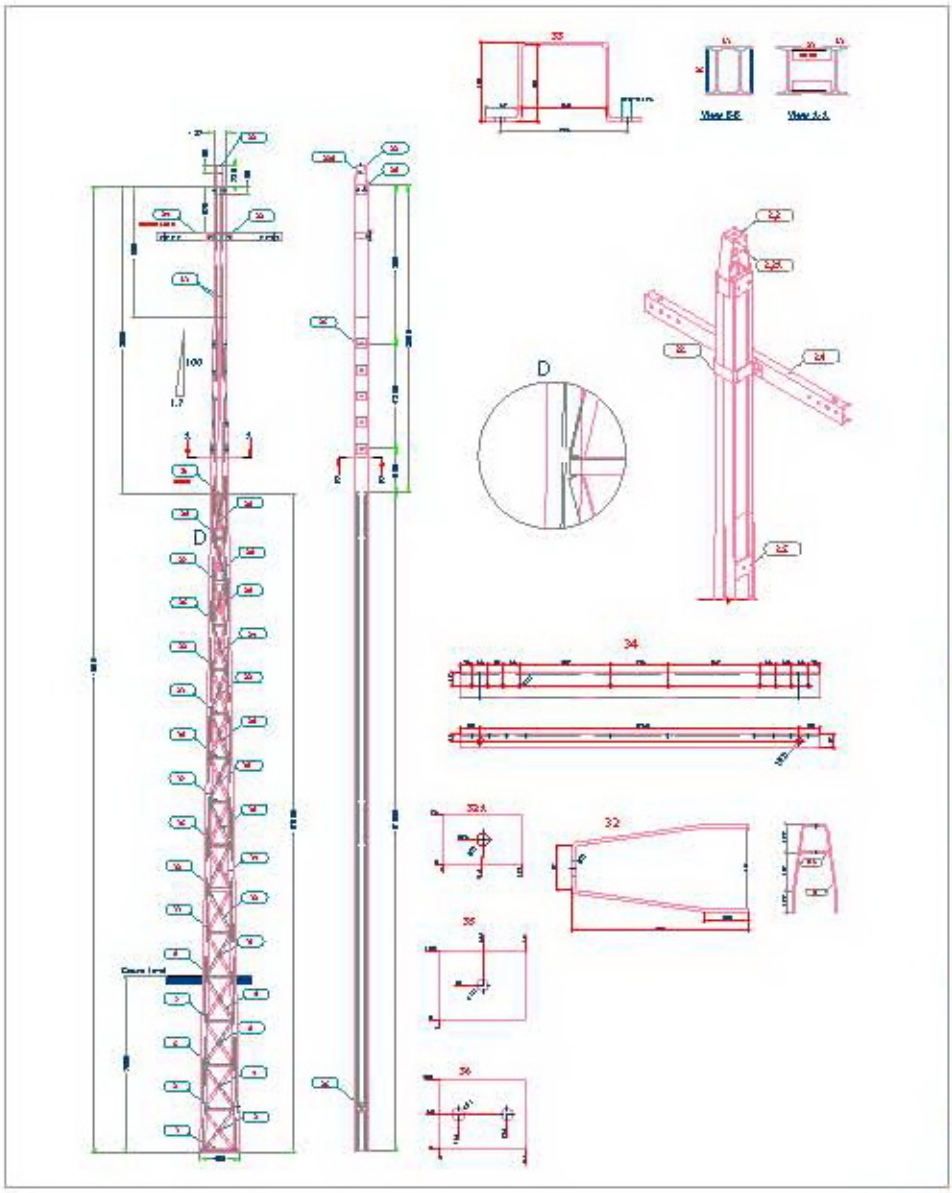
ولأهمية الأسواق المستهدفة للمنتجات ورغبة الزبائن أقدمت شركة "كام أراك" على إنشاء مصنع مستقل مزود بأحدث الأجهزة والتقنيات لإنتاج قوائم مدورة ومشبكة للتوزيع والإنارة.

# 9m Lattice Steel Pole



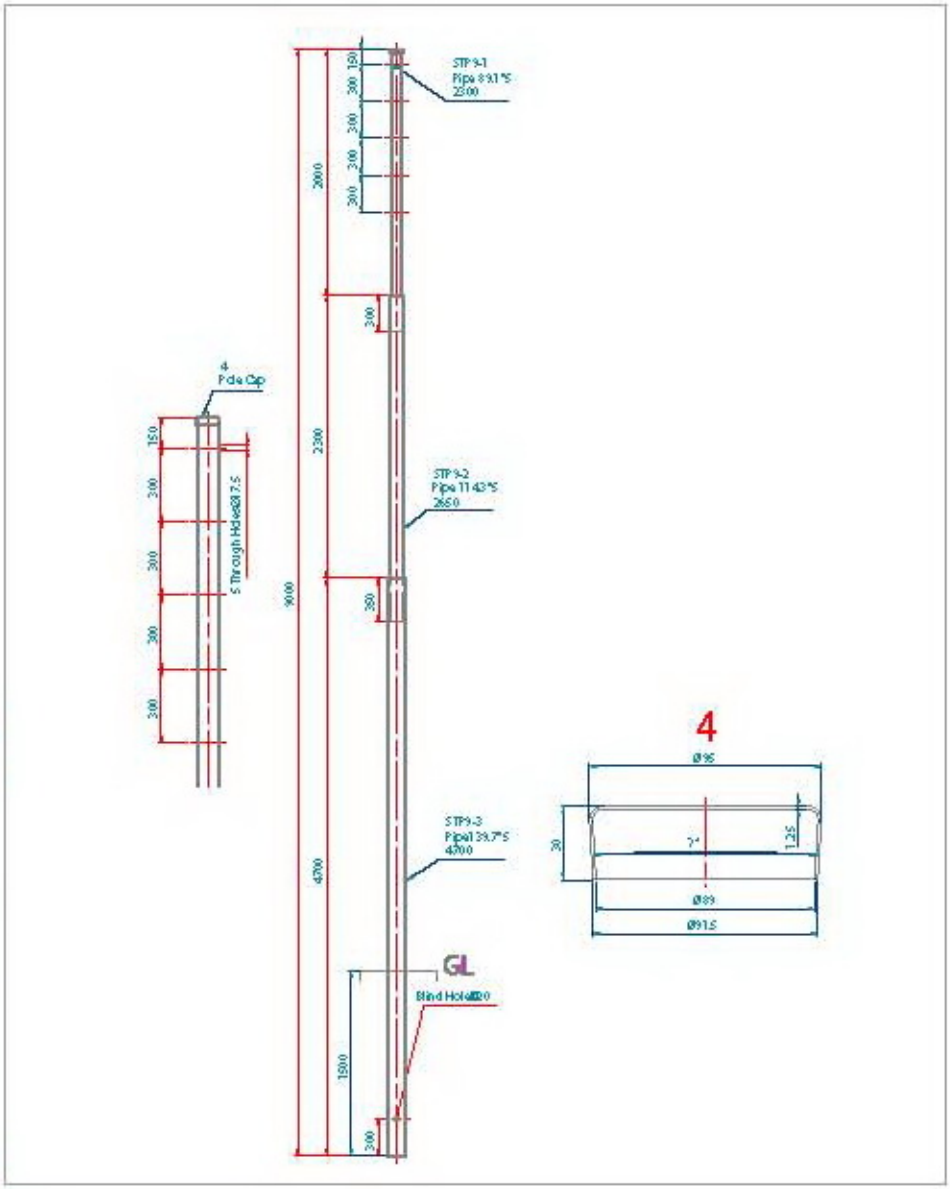

| Mark | Form | Size | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| L1 | H | IPN120 | 52 | 9000 | 2 | 199.8 |
| 1-...-28 | Angle | 30x30x3 | 37 | 345 | 2 | 26.7 |
| 29 | Plate | PL6 | 37 | 6x90x135 | 11 | 6 |
| All Dimentions are in mm<br>All Weights are in Kg | | | | **Total Weight** | | **232.5** |

# 11m Lattice Steel Pole



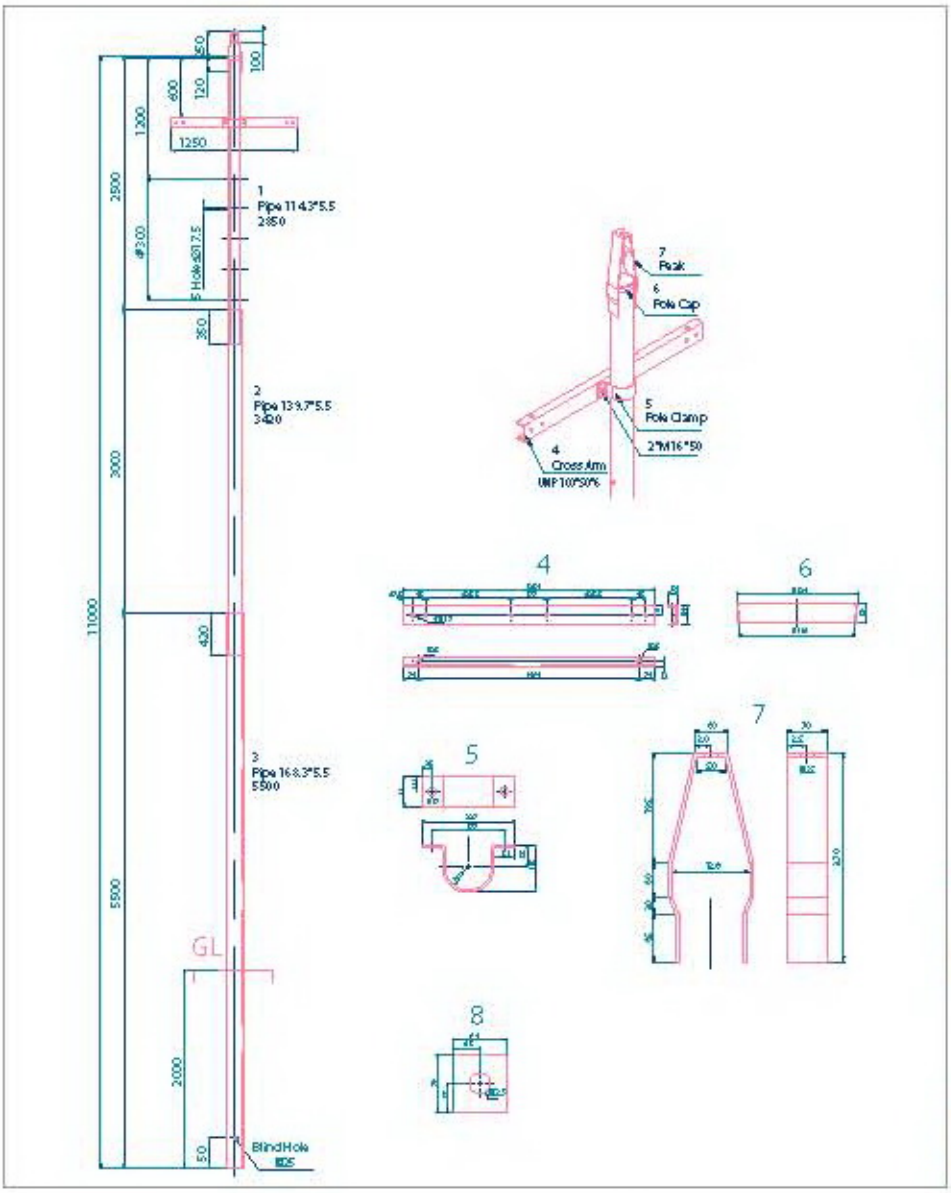
| Mark | Form | Size | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| L1 | H | IPN140 | 52 | 11000 | 2 | 323 |
| 1-...-31 | Angle | 30x30x3 | 37 | -- | 2 | 31 |
| 32 | Plate | PL6 | 37 | 6x75x740 | 1 | 2.5 |
| 32A | Plate | PL6 | 37 | 6x75x105 | 1 | 0.5 |
| 33 | Plate | PL6 | 37 | 6x75x515 | 1 | 2 |
| 34 | UPN | 100x50 | 44 | 1410 | 1 | 15 |
| 35 | Plate | PL6 | 37 | 6x100x123 | 11 | 6.5 |
| 36 | Plate | PL6 | 37 | 6x100x123 | 2 | 1 |
| M16x70 | B&N | M16x70 | 5.8 | | 2 | 0.5 |
| All Dimentions are in mm<br>All Weights are in Kg | | | Total Weight<br>With Out Cross arm | | | **382**<br>**364** |

# 9m Tubular Steel Pole
## (South of IRAQ)



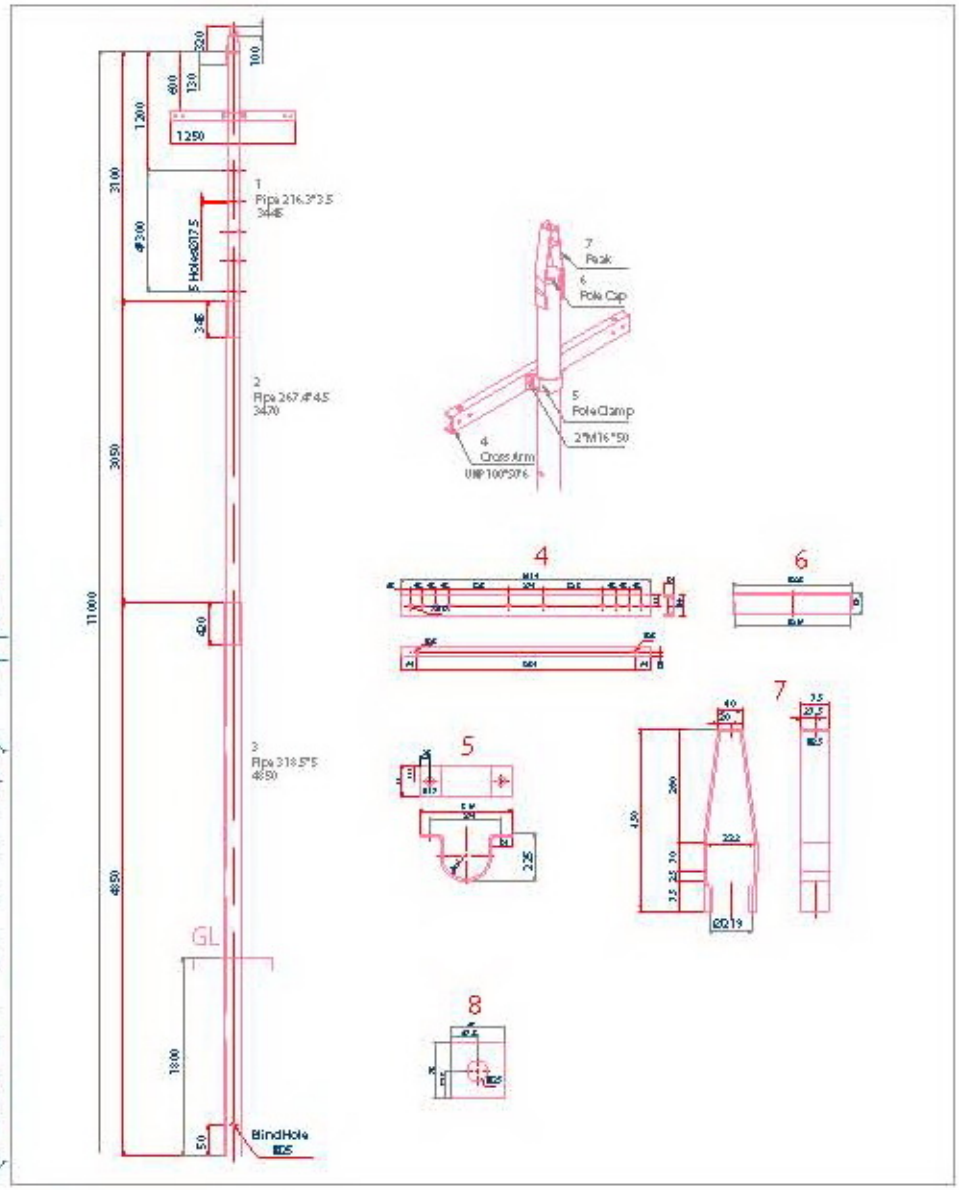
| Mark | Form | bSize | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| 1 | Pipe | 89.1x5 | S355JR | 2300 | 1 | 24 |
| 2 | Pipe | 114.3x5 | S355JR | 2650 | 1 | 35.8 |
| 3 | Pipe | 139.7x5 | S355JR | 4700 | 1 | 78 |
| 4 | Pipe | 1.2 | S235JR | 1.2x145x145 | 1 | 0.2 |
| All Dimentions are in mm<br>All Weights are in Kg | | | | **Total Weight** | | **138** |

# 11m Tubular Steel Pole
## (South of IRAQ)



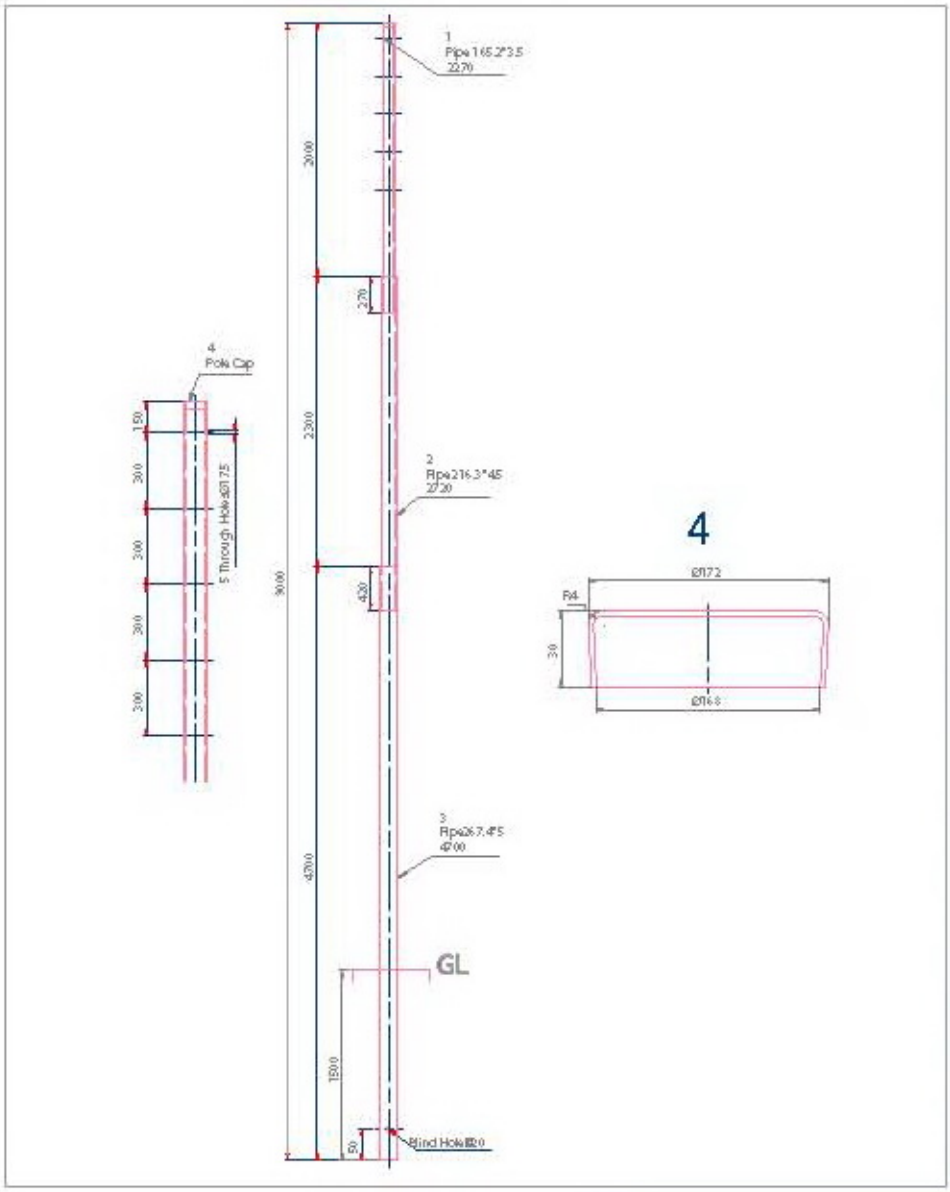

| Mark | Form | Size | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| 1 | Pipe | 114.3x5.5 | S355JR | 2850 | 1 | 42.1 |
| 2 | Pipe | 139.7x5.5 | S355JR | 3420 | 1 | 62.4 |
| 3 | Pipe | 168.3x5.5 | S355JR | 5500 | 1 | 121.7 |
| 4 | UNP | 100x50 | 44 | 1250 | 1 | 13.3 |
| 5 | Plate | 6 | S235JR | 6x75x391 | 1 | 1.4 |
| 6 | Plate | 1.2 | S235JR | 1.2x171x171 | 1 | 0.3 |
| 7 | Plate | 6 | S235JR | 6x70x770 | 1 | 2.5 |
| 8 | Plate | 6 | S235JR | 6x70x80 | 1 | 0.3 |
| M16x50 | B&N | M16x50 | 8.8 | | 2 | 0.3 |
| All Dimentions are in mm<br>All Weights are in Kg | | | Total Weight<br>With Out Cross arm | | | 244.2<br>229.3 |

# 11m Tubular Steel Pole
## (North of IRAQ) Type 1



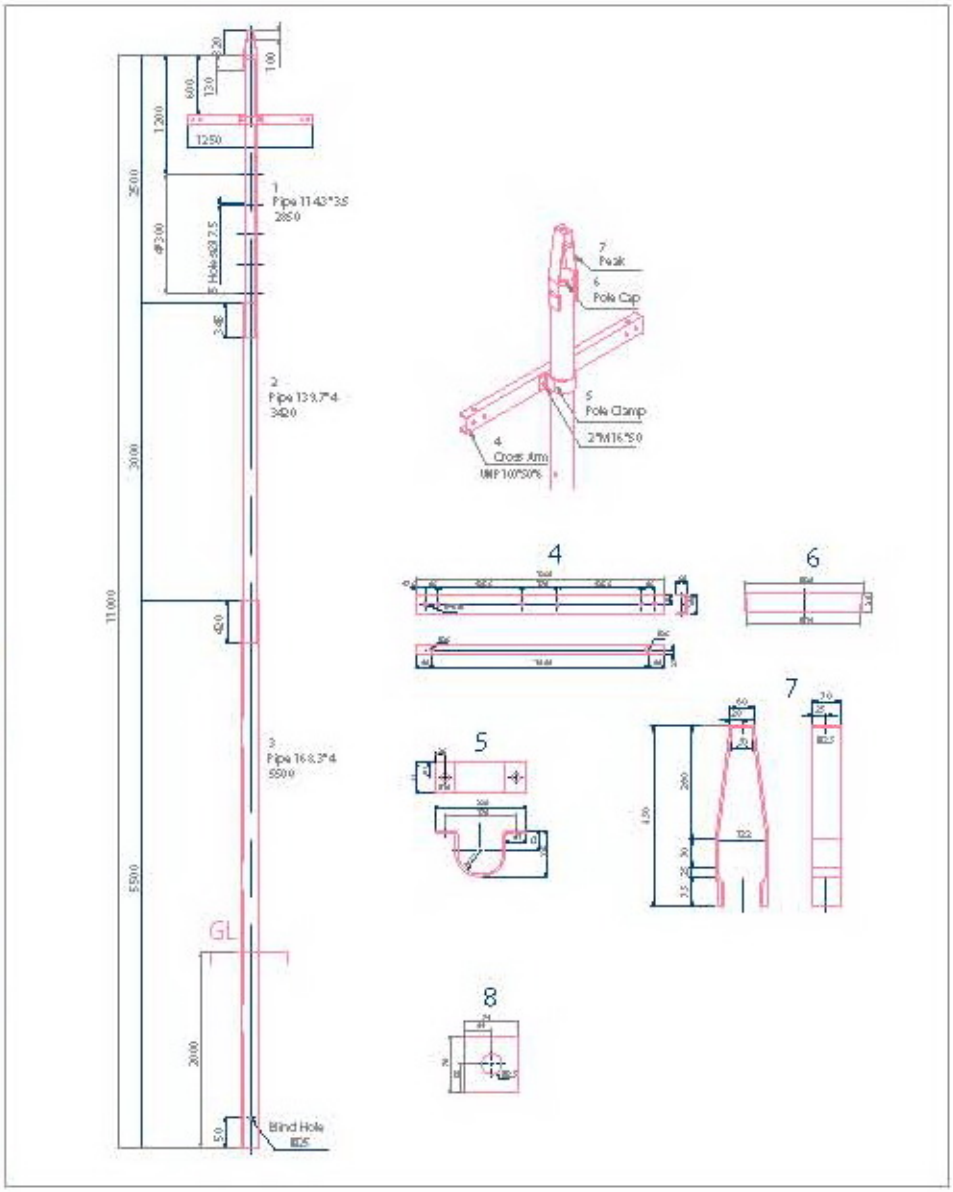
| Mark | Form | Size | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| 1 | Pipe | 216.3x3.5 | ST37 | 3445 | 1 | 63.2 |
| 2 | Pipe | 267.4x4.5 | ST37 | 3470 | 1 | 101.2 |
| 3 | Pipe | 318.5x5 | ST37 | 4850 | 1 | 187.5 |
| 4 | UNP | 100x50x6 | ST44 | 1410 | 1 | 14.9 |
| 5 | Plate | 6 | ST37 | 6x75x675 | 1 | 2.4 |
| 6 | Plate | 2 | ST37 | D283 | 1 | 1.0 |
| 7 | Plate | 6 | ST37 | 6x75x765 | 1 | 2.7 |
| 8 | Plate | 6 | ST37 | 6x75x95 | 1 | 0.3 |
| M16x50 | B&N | M16x50 | 8.8 | -- | 2 | 0.3 |
| All Dimentions are in mm | | | Total Weight | | | 373.6 |
| All Weights are in Kg | | | With Out Cross arm | | | 355.9 |

# 9m Tubular Steel Pole
## (North of IRAQ) Type 2

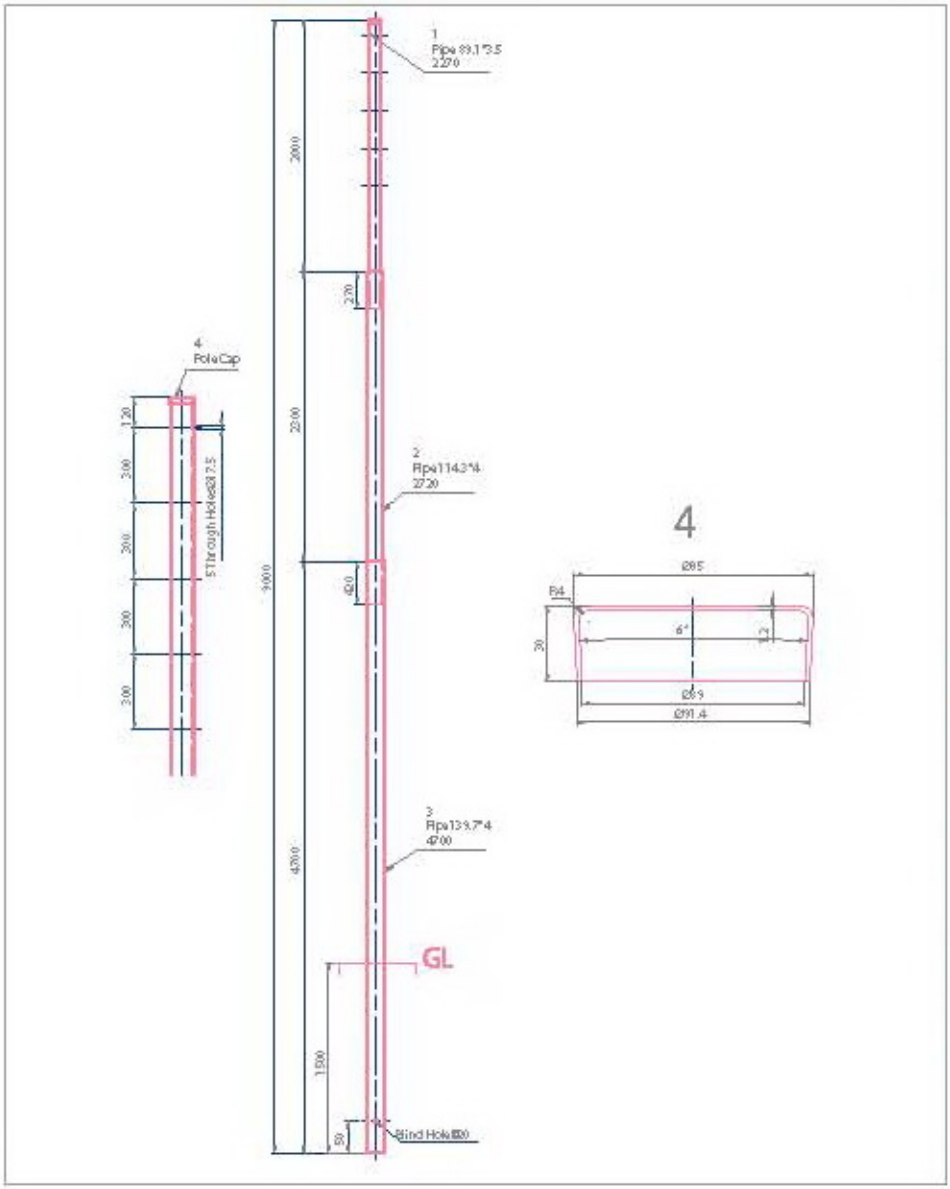



| Mark | Form | Size | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| 1 | Pipe | 165.2x3.5 | ST37 | 2270 | 1 | 31.7 |
| 2 | Pipe | 216.3x4.5 | ST37 | 2720 | 1 | 63.9 |
| 3 | Pipe | 267.4x4.5 | ST37 | 4700 | 1 | 152.0 |
| 4 | Plate | 2 | ST37 | D232 | 1 | 0.7 |
| All Dimentions are in mm<br>All Weights are in Kg | | | | **Total Weight** | | **248.2** |

# 11m Tubular Steel Pole
## (North of IRAQ) Type 3



| Mark | Form | Size | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| 1 | Pipe | 114.3x3.5 | S235JR | 2845 | 1 | 27.2 |
| 2 | Pipe | 139.7x4 | S235JR | 3420 | 1 | 45.8 |
| 3 | Pipe | 168,3x4 | S235JR | 5500 | 1 | 89.2 |
| 4 | UNP | 100x50 | 44 | 1250 | 1 | 13.3 |
| 5 | Plate | 6 | S235JR | 6x75x391 | 1 | 1.4 |
| 6 | Plate | 1.2 | S235JR | 1.2x171x171 | 1 | 0.3 |
| 7 | Plate | 6 | S235JR | 6x70x950 | 1 | 3.1 |
| 8 | Plate | 6 | S235JR | 6x80x70 | 1 | 0.3 |
| M16x60 | B&N | M16x50 | 8.8 | --- | 2 | 0.3 |
| All Dimentions are in mm | | | Total Weight | | | 180.8 |
| All Weights are in Kg | | | With Out Cross arm | | | 165.8 |




# 9m Tubular Steel Pole
## (North of IRAQ) Type 4

| Mark | Form | Size | ST | Leight | QTY | Total w |
|---|---|---|---|---|---|---|
| 4TP 9-1 | D | 89.1x3.5 | S235JR | 2270 | 1 | 31.7 |
| 4TP 9-2 | D | 114.3x4 | S235JR | 2720 | 1 | 63.9 |
| 4TP 9-3 | D | 139.7x4 | S235JR | 4700 | 1 | 152.0 |
| 4TP 9-4 | PL | 2x1000x20 | S235JR | 1 .2x1 45x1 45 | 1 | 0.7 |
| All Dimentions are in mm<br>All Weights are in Kg | | | | **Total Weight** | | **109.5** |

- ISO 261: ISO General Purposes Metric Screw Threads, General Plan
- ISO 262: ISO General Purposes Metric Screw Threads, Selected Sizes
- ISO 724: ISO Metric Screw Threads: Basic Dimensions
- ISO 898: Mechanical Properties of Fasteners- Bolts, Screws and Studs
- ISO 965: ISO General Purpose Metric Screw Threads
- ISO 1459: Metallic coatings – Protection against corrosion by hot dip galvanizing – Guiding principles
- ISO 1460: Metallic coatings Hot dip galvanized coatings on ferrous materials. Gravimetric determination of the mass per unit area.
- ISO 1461: Metallic coatings – Hot dip galvanized coatings on fabricated ferrous products
- ISO 2178: Non-magnetic coatings on magnetic substrates Measurement of coating thickness Magnetic method.
- ISO 6892: Metallic Materials - Tensile Testing
- ISO 4016: Hexagon Head Bolts - Product Grade C
- ISO 9000: Quality management and quality assurance standards

**CEN - European Committee for Standardization**
**(Committee European de Normalisation)**

- EN 10025: Hot rolled structural steel

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