



Kalina power plant (DE)
Kalina power plant

Grünwalder Weg 48 - 82008 Unterhaching
(GT Grünwalder Weg)

Closing date: Tuesday **23 OCTOBER** until 14:00



Viewing:

By appointment

Grünwalder Weg 48 - 82008 Unterhaching (Germany)



Tuesday 23 October 2018 Kalina power plant

Special Conditions

Closing date	Tuesday 16 October 2018 starting 14:00 CET
Viewing	By appointment GT Grünwalder Weg Grünwalder Weg 48 82008 Unterhaching, Germany
Company organising this Online Auction	Troostwijk Auktionen GmbH & Co. KG Stolberger Straße 313 50933 Köln, Germany Phone: +49 221 69066-0 Fax: +49 221 69066-10 E-mail: info@troostwijk.de
Markup	18.00%
VAT	19.00%
Collection	By appointment GT Grünwalder Weg Grünwalder Weg 48 82008 Unterhaching, Germany
Collection details	The buyer is fully responsible for the dismantling, loading and transportation of the bought lots. Troostwijk Auktionen GmbH & Co. KG cannot accept any responsibility unless indicated otherwise. The collection/pick-up will only take place on the mentioned delivery date/time and address. Please show your purchase agreement upon collection.
Information VAT	Buyers from Germany have to pay the VAT. All foreign buyers from countries belonging to the European Community must inform us of their VAT number. If a buyer does not furnish this proof, the auctioneer has to charge the legal German VAT. This VAT amount cannot be refunded. Foreign buyers from countries not belonging to the European Community have to pay the legal German VAT as deposit to the auctioneer. After receipt of the original customs documents, which must be stamped officially to prove that the export has taken place, the auctioneer will refund the paid German VAT.
Payment	Your immediate bank payment is required within 48 hours after receipt of the purchase agreement (proforma invoice). Please state your buyer number and the auction name. Troostwijk Auktionen GmbH & Co. KG Deutsche Bank AG, Frankfurt Account no.: 802 731 001 Bank code: 500 700 10 IBAN: DE89 5007 0010 0802 7310 01 SWIFT: DEUTDEFF
Prolongation	If a bid is made in the last 5 minutes before the lot closes, the closing time of that lot will be extended with 5 minutes until no bids are made.
Combinations	All lots in a combination will be sold individually first. After the last lot is sold, the total of bids is raised 10%. This is the starting bid of the combination. If the combination is sold it overrules the individual bids, if not the individual bids are applicable.
Follow lots	After registration and login, lots can be 'followed' via 'My Troostwijk'. This option has been constrained to a maximum of 100 lots per user per auction.
Subject to allocation and minimum prices	At certain auctions some lots will be sold under reserve or minimum/reserve prices have been set! The seller of the machines will be informed about the highest bids after the end of the auction sale. He will then decide if the lots will be sold for the



prices realized. Each client will be informed latest 2 work days after the end of the online auction whether his bid is accepted or not. During these days all bids are binding. If a lot is sold under reserve or if you should not have met the minimum/reserve price yet, this is mentioned below the starting bid.

Terms and Conditions of Sale

For the auction the General Terms and Conditions of Online Auction are applicable concerning the (possible) purchase of movable assets, in addition to these Special Conditions.

Contact

e-mail: info@troostwijk.de, phone: +49-221-690660

Quantity, capacity, dimensions and weight of goods

Where a lot description contains details of quantities, capacities, dimensions or weights of the goods, these data are indicative only and no rights can be derived from this information. Bidders must satisfy themselves as to the accuracy of such data. Although the information contained herein was obtained from resources deemed reliable, the seller and Troostwijk make no warranty, expressed or implied as to the accuracy of the information.



Lot	Number Description
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1	<p data-bbox="204 293 478 324">1 Kalina power plant</p> <p data-bbox="231 331 1535 1449">A Kalina plant for generating electricity from waste heat is up for sale. Previously the Kalina plant at the Unterhaching site was operated with thermal water as a heat transfer medium. The working medium of the Kalina plant is ammonia water. This mixture enables an optimum electricity yield when using so-called low-temperature heat sources such as thermal water in this case. Due to a non-isothermal heat transfer the thermal transfer losses in the heat exchangers are kept to a minimum. Based on the following design data, the gross electrical output is 3,360 kW. Thermal water at the inlet flange of the evaporator Specific heat capacity 4.16 kJ/kg K Density at 20 °C 999.8 kg/m³ Flow rate 125 l/s Temperature 122 °C Max. particle size < 1 mm particle size < 1 mm Cooling water specific heat capacity Specific heat capacity 4.18 kJ/kg K Density at 20 °C 999.7 kg/m³ Flow rate 630l/s Temperature 11 °C Climatic data Relative humidity 60 %. Work equipment The ammonia-water mixture at the above design point is as follows 89 mass percent ammonia and 11 mass percent deionised water. The main components of the Kalina plant are - One turbine (Cryo Star), one planetary gear (BHS) and one generator (AVK) installed together on one machine bed / sled. - A lubricating oil system (Franke Filter) for the turbine, the gearbox and the generator. - A corresponding electrical control (Cryo Star) - A comprehensive spare parts package as the basis for overhauling the turbine including turbine runner and Burgmann seal (Cryo Star) - Plate heat exchanger (API Schmidt-Bretten) o 5 capacitors o 3 Preheater o 3 Evaporator (incomplete ! - only the racks - the plates are missing) o 2 Secondary heat exchanger - A condensate container / chemical tank (Reuther) - A low-pressure separator / cyclone (hood + shell hammer) - A high pressure separator (Burgess Manning) - Two ammonia feed pumps (Apollo), one as replacement, as good as new, packed - Two ammonia injection pumps (Apollo), one as replacement, as good as new, packaged - A compressed air system (Kaeser) - A nitrogen generator (Hunter) - defective - - A transformer (Siemens) - One 6 kV switchgear (Siemens) - A low-voltage system including electrical control with automation system PCS 7 (Siemens) in various switch cabinets - Various servers, screens, accessories - 5 Frequency inverter (Siemens) - Two cooling water pumps (Apollo) - one pump is defective - - A cooling tower (GEA) mainly made of wood, aluminium clad, with three fans, a water irrigation system - in need of overhaul -, a screen basket system at the water outlet with crane. The cooling tower is equipped with a soundproofing system made of aluminium and soundproofing wool (32 dB(A)). - A cooling water conditioning plant (Weidener Wassertechnik) - An ammonia dosing system in containers (HVAC) for ammonia feed-in - A demineralized water tank - Various pumps (Apollo) - Various shut-off valves (e.g. Ebro, Hesch, etc.), some with electric and pneumatic actuators - Various safety valves (readers, etc.) - Various field devices - e.g. pressure measurements, temperature measurements, flow measurements, level measurements (Siemens etc.) - Various pipelines, mostly made of carbon steel, partly of stainless steel - Various spare parts, e.g. two fan gearboxes (SEW), fan blades (Houwden), one drainage pump - as good as new, packed - - Comprehensive documentation</p>
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General conditions Tender Sale TroostwijkAuctions.com

Article 1. Definitions

General User Conditions:	The General Terms and Conditions of Business governing the use of the Troostwijk Veilingen B.V. website
General Terms and Conditions of Online Auctions:	These General Terms and Conditions for an online auction governing the procedure for the online auction and defining the position, rights and duties of the contracting parties / participants.
User:	Anyone who registers on the Troostwijk Veilingen B.V. website
User agreement:	Agreement between Troostwijk Veilingen B.V. and the user
Bidder:	Anyone who bids in an online auction
Bid:	A binding amount bid by the user in an auction for a lot
Purchase price:	Made up of the highest bid at the end of the auction, the commission and any VAT due.
Purchase contract:	Agreement between the buyer and seller, which comes into being upon acceptance of a bid by Troostwijk
Buyer:	Bidder whose bid is accepted for the lot
Lot:	(An) item(s) auctioned (also items auctioned collectively under one number)
(Online) auction:	The auctioning of movable property organised by Troostwijk on the Troostwijk Veilingen B.V. website
Registration:	Registration of the user on the Troostwijk Veilingen B.V. website by completing the registration form on the website
Special Terms and Conditions of an Online Auction:	Special additional conditions only applying for the respective online auction
Troostwijk:	Troostwijk Auktionen GmbH & Co. KG
Seller:	The party on behalf of which a lot is auctioned
Website:	The www.TroostwijkAuctions.com website, which is maintained by Troostwijk Veilingen B.V. in Amsterdam and which serves as the platform for auctions held by Troostwijk
Bid acceptance:	Confirmation by Troostwijk that the highest bidder's bid for a lot or a combination of lots is accepted upon payment of the purchase price

Article 2. General Terms and Conditions of Business

- 2.1 Troostwijk auctions take place on the website of Troostwijk Veilingen B.V., which provides the platform for auctions. The user shall use the website in accordance with the General User Conditions of Troostwijk Veilingen B.V.
- 2.2 The General Terms and Conditions of Online Auctions contain the general regulations for the auction. The auction takes place exclusively on the basis of these conditions. Participation in the auctions constitutes acceptance of these conditions. Special Terms and Conditions of an Online Auction may also apply to an auction. These contain additions or variations to the General Terms and Conditions of Online Auctions. In case of doubt, the Special Terms and Conditions of the Online Auction take precedence.
- 2.3 Troostwijk can make changes to these General Terms and Conditions. Changes take effect upon receipt of respective notification by the user and bidder.

Article 3. Registration

- 3.1 Bidders who are registered users with Troostwijk Veilingen B.V. and who have accepted its General User Conditions can take part in auctions.
- 3.2 A bid can be made by anyone who has accepted the General Terms and Conditions of Online Auctions and the Special Terms and Conditions of an Online Auction for an auction.



Article 4. Auction

- 4.1 Auctions are held on behalf of and for the account of the seller. Troostwijk is not a contracting party to any purchase contract which comes into being upon acceptance of the bid; it only brokers the purchase contract.
- 4.2 Dates, such as the start and the end of an auction, are contained in the Special Terms and Conditions of an Online Auction.
- 4.3 Troostwijk is responsible for organising, preparing and holding the auction.
- 4.4 Troostwijk may choose:
- not to accept a bid generally or – for important cause – from certain bidders;
 - to exclude bidders from an auction;
 - to correct errors made by Troostwijk in bids and/or accepted bids with appropriate notification to the bidder;
 - to take any other measures required;
- 4.5 Troostwijk's decision as regards what happens during the auction is binding.
- 4.6 Forced sales are marked as such in the Special Terms and Conditions of the Online Auction.

Article 5. Cancellation, technical faults

- 5.1 Troostwijk reserves the right to cancel, prematurely end or extend an auction for important cause. In the event of a technical fault to the website which results in it being not fully accessible and/or not accessible to all users, Troostwijk can extend the auction by up to 24 hours.
- 5.2 By registering, the user declares that he is aware of the special circumstances of an internet auction. In particular he is aware that the current state of technology can result in faults and downtime, which can make access to the internet auction and the website difficult or impossible.
- 5.3 Troostwijk is only responsible for properly conducting the auction on the www.TroostwijkAuctions.com website, not for any technical faults. Troostwijk's liability is limited and is based on the General Provisions, as set out in Article 15.

Article 6. Viewing days; entering buildings & property

- 6.1 Any viewing dates are specified in the Special Terms and Conditions of the Online Auction.
- 6.2 Viewers enter buildings and property at their own risk. Viewers must follow the instructions issued by Troostwijk or its appointees. The seller accepts no liability whatsoever for damages resulting from entering the buildings and property. In addition, the liability limitations of the General Provisions for Troostwijk and the seller, as set out in Article 15, apply.

Article 7. Lots

- 7.1 Individual lots or combinations are auctioned.
- 7.2 Combinations, i.e. the auctioning of several lots together, are displayed in the system. Combination lots are auctioned in two stages:
- a) Firstly the individual lots are auctioned. The bid is accepted under the condition precedent that the lot is not knocked down as part of a combination lot. Once the bids for the individual lots have been accepted, bids can be made on the combination. If no bids are made on the combination, the sale of the individual lots goes ahead.
 - b) If bids are made on the combination, the following applies: The bid is accepted for the combination if the highest bid is higher than the total bids resp. the start prices for the individual lots. The bids for the individual lots are then declined because the condition has not been fulfilled.
- 7.3 Troostwijk can combine various items to form lots, divide lots and remove lots from the auction.
- 7.4 Troostwijk can demand that a bidder provides standard banking security in advance for certain lots.

Article 8. Bids

- 8.1 A bidder can bid in auctions as soon as he has registered on the Troostwijk website and has activated his account by clicking the link in the email that he received after registration. Bidders can bid on one or more lots. Bids can only be made without conditions and reservations attached. Bids are binding, revocation is not possible. The bidder shall receive email confirmation of every bid made and every higher bid by a third party. This notification is not acceptance of the bid.
- 8.2 Bids can be made as firm bids or maximum bids.
- a) In the case of a firm bid (static), the user offers a fixed amount for each lot which is displayed in the system.
 - b) In the case of a maximum bid (proxy), the user states the maximum price he is prepared to pay for a lot. The maximum bid is not shown in the system. If a third party outbids the user, the current bid is increased in increments until a third party outbids the maximum bid. A maximum bid can only be retracted by the user in the interim if he makes a firm bid which is the highest bid at that moment.
- 8.3 Bids do not yet include sales tax and the commission. The amount of the commission can be found in the Special Terms and Conditions of the Online Auction.



8.4 Troostwijk and/or the seller can reject bids without stating the reasons. Troostwijk can bid on behalf of third parties.

Article 9. Acceptance of bid & purchase contract

- 9.1 A purchase contract for one or more lots only comes into being when the bid has been accepted. The buyer is informed by email of the resulting purchase contract (acceptance of bid). A bid is accepted within two working days of the close of the auction at the latest.
- 9.2 Consumers have no right of revocation as per § 312 d BGB [German Civil Code], as the purchase contract comes into being in the context of an auction as per § 156 BGB [German Civil Code] (§ 312 d Para. 5 No. 5 BGB [German Civil Code]).
- 9.3 Troostwijk is entitled not to accept a bid or to accept a bid under conditions precedent.
- 9.4 As a general rule, the user with the highest bid is awarded the bid. The bid is accepted if no further bids are made 10 minutes before the end of the auction. Otherwise the closing time for this lot is postponed for further 5 minutes. If another bid is made, the auction ends when the highest bid is made, if this is not outbid within five minutes.

Article 10. Passage of risk / passage of title

- 10.1 When a bid is accepted, the risk of accidental perishing or loss of the auctioned goods and the risk of loss or damage through fire, theft or burglary passes to the successful bidder.
- 10.2 Ownership only passes to the buyer on full payment.

Article 11. Obligations of the buyer

- 11.1 When a bid is accepted, the buyer is obliged to pay the purchase price plus statutory sales tax and the commission and to collect the lot.
- 11.2 Payment must be made to the account specified by Troostwijk in the stipulated currency within three working days of acceptance of the bid.
- 11.3 Statutory default interest shall be charged if payment is delayed. The rights of the seller are based on the statutory provisions.
- 11.4 If the buyer fails to fulfil an obligation, in particular:
- (i) does not pay the purchase price on time or in full
 - (ii) does not collect the lots on time, and/or
 - (iii) does not provide the information required for delivery, this shall automatically constitute default without further notice of default being required. Troostwijk can then cancel the purchase contract on behalf of the seller. In such cases, Troostwijk can assign lots to another bidder, without Troostwijk and/or the seller being liable for damages.
- 11.5 In the event of a cancellation, the buyer is liable to pay compensation for any resulting damages.

Article 12. Collection

- 12.1 The buyer may only and must collect the goods at the times specified in the Special Terms and Conditions of the Online Auction. Troostwijk can, for technical reasons, specify that a certain lot can only be collected once other lots have been delivered.
- 12.2 The buyer, whose lot(s) is/are preventing the collection of other lots, must ensure that said lots are collected immediately following an email and/or a letter from Troostwijk to the address specified by the buyer. If this does not happen, Troostwijk can arrange for the lot(s) to be collected and possibly stored by a third party at the expense and risk of the buyer.
- 12.3 The buyer is obliged to carefully dismantle and collect his lots. He shall be liable for any damages caused to the property of others in this respect. Further, he is obliged to protect Troostwijk and the seller from all claims by third parties arising from the dismantling and/or collection.
- 12.4 The buyer is obliged to follow the instructions of Troostwijk and/or Troostwijk's appointees when dismantling and collecting his lots.
- 12.5 The buyer must ensure that he or the person dismantling or transporting the lots on his behalf has the required permits. Troostwijk and/or the seller cannot be held liable if the required permits are missing and/or official regulations are not observed when the lot(s) are being dismantled and/or transported by or for the buyer.
- 12.6 In situations where it is necessary to pull down (parts) of a building to remove the allocated lots, prior consultation and written consent must be sought from Troostwijk and the conditions imposed by Troostwijk at the time of bid acceptance must be observed.
- 12.7 Troostwijk reserves the right to make the collection of lots conditional upon payment of a deposit for any damages. Troostwijk shall notify the buyer of the lots concerned and the amount of the deposit. The deposit shall be reimbursed to the buyer following damage-free collection.
- 12.8 Troostwijk reserves the right that the dismantling of the buyer's goods has to be done compulsory by a specific company. In such case, Troostwijk will announce this in the auction catalogue. The buyer has to bear the cost of such services. In some cases, the cost will be specified in the auction catalogue.



Article 13. Liability / Troostwijk warranty

Troostwijk only accepts liability for preparing and holding the auction in accordance with the legal regulations.

The following also applies:

- 13.1 Claims by the seller as well as by the bidder or the buyer on the grounds of breach of duty are excluded, in particular as regards advice in valuation matters or defects in the items.
- 13.2 The descriptions of the items by Troostwijk, e.g. in the sales catalogue or in a list, are based on information from the seller. Troostwijk is only liable for conveying the information appropriately, not for the objective accuracy of this information.
- 13.3 Information provided by Troostwijk serves only to help differentiate between products and in no way constitutes a warranty as per § 444 BGB [German Civil Code] or a quality agreement as per § 434 Para. 1 Clause 1 BGB [German Civil Code] for the items on sale.
- 13.4 The items are used. Troostwijk does not sell on its own behalf and thus accepts no warranty for material defects or defects of title and is not liable for the quantity, quality, dimensions, years of construction or completeness.
- 13.5 The above limitations do not apply if Troostwijk acts with deliberate or gross negligence, breaches a fundamental contractual obligation or if physical injury occurs.

Article 14. Liability / seller warranty

The seller is liable towards the buyer for defects in the items in accordance with the following provisions:

- 14.1 The buyer has had the opportunity to view the items in advance. The items are sold as seen and to the exclusion of any warranty for material defects and defects of title. The items were sold in particular without any guarantee for visible or hidden defects or warranty in respect of completeness, quantity, effect, usability, saleability, the existence or absence of rights or claims by third parties and/or the transfer option to third parties.
- 14.2 The seller accepts no liability for a certain quality or a normal use of the items.
- 14.3 The seller accepts no liability for advertising messages by the manufacturer.
- 14.4 The above limitations do not apply if the seller acts with deliberate or gross negligence, breaches a fundamental contractual obligation or if physical injury occurs.
- 14.5 The legal regulations on warranty rights for consumers as per BGB [German Civil Code] apply. The limitation period is shortened to one year.

Article 15. Limitation of liability of Troostwijk / Seller

- 15.1 The limitation of liability applies to Troostwijk and the seller, as well as their legal representatives, managerial employees and any vicarious agents.
- 15.2 Liability is only accepted in the case of intent or gross negligence.
- 15.3 Liability for consequential damages, in particular lost profit, is only accepted in the case of intent or gross negligence.
- 15.4 Liability is limited to the amount of damages typically foreseeable when the contract is concluded, provided there is no intent or gross negligence.
- 15.5 The above limitations do not apply if a legally fundamental obligation is breached, if an express warranty is accepted or for damages arising from physical injury, harm to health and binding legal regulations.

Article 16. Severability clause / written form

- 16.1 Should any of the provisions of this agreement be or become wholly or partly ineffective, null and void or unenforceable, this shall not affect the validity of the other provisions of the contract as a whole. The ineffective, null and void or unenforceable provision shall be replaced by the effective and enforceable provision which corresponds most closely to the parties' economic objectives originally intended by the ineffective, null and void or unenforceable provision.
- 16.2 Amendments to and variations of these General Terms and Conditions of Online Auctions are only valid on the basis of written agreement between the parties.

Article 17. Applicable law / place of jurisdiction

- 17.1 This contract and the resulting obligations are subject to German law. The UN Convention on Contracts for the International Sale of Goods shall not apply.
- 17.2 All disputes arising in respect of the legal relations with Troostwijk fall under the exclusive jurisdiction of the Cologne local or district court. The General Provisions apply to disputes with the seller.

About Troostwijk

Did you know?

- we organise auctions in **25 countries**
- we have **1,6 million** page views on a top day

The European Online Auctioneer and Valuer

1300 Auctions

Troostwijk conducts
annually **1300** auction sales
all over Europe

Statistics

- Every year we deal with **50.000** bidders
- from 95 different countries
- over 500.000 registrations

15 Countries

Troostwijk has
own offices
in 15 European countries

85 Years

Troostwijk is conducting
auctions since 1930 and
has 85 years of experience