



Turkish Ceramic Industry & Raw Materials in Turkey

Energy Security Dilemma of Turkey in the Context of Domestic Coal Policies

 **KENSAN**
MAKİNA SANAYİİ TİCARET LİMİTED ŞİRKETİ

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crushing screening
washing
machinery

Kensan's Approach in Selecting Crushers, Key to the Perfect Production!

Kensan Makina has been founded by Kenan Döker in 2011, who has 15 years of experience in crushing and screening plant production in fact and is currently the chief executive of the company. The company has acquired a respectable place in the market without ignoring new technological developments and recently made a distinguished name for itself with the machines manufactured since it was founded. We had an interview with Mining Engineer Savaş Başar Tonguç who is the Sales and Project Designing Representative of the company to get information on Kensan Makina attracting attention with its rise in the sector.



► **Can we get information about you and the company to begin with?**

► **Savaş Başar Tonguç:** I'm the sales and project designing manager of Kensan Makine. I'm a mining engineer. I have participated in the production activities in open pit crushing and screening plants for years. I am well-experienced in mining geology and analysis, crushing and screening plants, gradation and technical specifications.

Since it was founded, our firm has manufactured crushers, screening and washing plants for the mine sites. Our company has made it a principle to manufacture high quality, solid machinery and to work honestly. It has been forging ahead in acquiring a respectable name in its sector by staying loyal to total quality manner and making research and development for the matter concerned with respect to highest quality standards. Our firm works with its full energy to perform all activities professionally and aims to provide full satisfaction to its customers during and after its services.

► **Why should the clients planning to invest in this sector choose you?**

► From the beginning our motto was "it works continuously for you". The weakest ring of the chain determines your capacity. Selection of the crushing and screening plant is one of the most important factors in quarrying. Basic principle for us is not to mine but to mine in most productive way. The more you work with the same employees, the more your labor cost decreases. One of the misunderstood point regarding the crushing and screening is the estimations on the time passed for crushing





a truck-load of materials discharged to a feeding bunker. Actually the less the plant stops the more your average monthly production increases. We are assertive about it. We have manufactured perfect plants. We make investigations with our expert teams on site before installing the plant. Considering the related lab analyses, customer profile and productivity of product range and estimating the most appropriate and most realistic capacity we offer the most actual plant project to the customer. To sell the plant with the promise of capacities that are higher than the real capacity and to mislead the customers with false declarations are contrary to our company codes of honesty and ethics. Since our customers are well-aware of our codes, they choose us not to be faced with any surprise. As you would appreciate crushing and screening plants are the heavy-duty vehicles with high initial investment costs.

▶ **Can you inform us about your product range?**

▶ We are manufacturing all kinds of crushers you can imagine by means of a crushing-screening plant in mining. Primary impact crushers and jaw crushers, secondary impact crushers, jaw crushers and cone crushers, tertiary impact crushers and vertical shaft crushers

are available with various sizes and capacities. Furthermore complete plants including crushing plants, conveyor bands, screening and washing plants are in our product range.

▶ **Can you inform us about project designing process?**

▶ Before all, we pay attention to our customers' requests. And then we visit the mine site with our expert team and make our visual investigations. We request mine analysis values. If they are not available, we accomplish the relevant analyses. We estimate the final product percentage distribution in accordance with the corresponding production standard (TS706 ready-mixed

concrete, highways, or high-speed train etc.). We reveal the most appropriate, most productive and highest-capacity plant projects in the light of these information.

▶ **You start to work with a quite detailed viewpoint. We think that your difference arises out with it. Isn't it?**

▶ A crushing & screening plant is installed using machinery with high initial investment costs. Following amendments in the production plants may cause production loss and increase the costs. The factors like accumulation of a mountain of the products which have to be produced unnecessarily even if they are not sold, cancellations and ▶





returns of products, quick abrasion and breaks caused by the selection of wrong machinery and using the parts of poor quality are the principal reasons of this. Why would producers estimate these operations in the beginning and fix the problem totally in advance? Since it is cheaper, electricity is preferred more than diesel oil. When the material is carried and broken again, it makes the production less profitable, which have been already performed with low earnings.

▶ **Can you tell us the importance of the analyses and investigations on the production site?**

▶ Even the limestone which is used most commonly in the market has many types. They are called differently in accordance with their contents, formations, crystal patterns and hardnesses. For instance if you put dolomitic limestone and argillaceous limestone having different L.A. values and hardness on the Mohs scale in same equation, you may obtain different results. Many factors like these may affect your production rate, capacity, fine material content and costs seriously. That is why we consider the results of analysis in advance and then plan the plant accordingly.

▶ **How do we choose the jaw crusher or impact crusher?**

▶ Jaw crushers are preferred mostly for very hard and abrasive ore types. As required by their operational principle, they crush the materials by smashing them. Since their size reduction rates are low and don't give the final product directly, they are not preferred for the ore types with low hardness and abrasion. Impact crushers are preferred since they give product directly and their size reduction rate and the capacity is high.

▶ **Cone crushers have become prominent recently. Could you give some information about it?**

▶ KC1000 is a secondary crusher which is designed and manufactured 100% by Turkish engineers and intended for crushing mineral ores which are highly abrasive (quartz, bauxite, granite, iron ore) and desired to be produced industrially in ballast sizes (calcite, basalt) and doesn't have bearing and has bronze bushing.

We have manufactured our first cone crusher as KC1000 model. After we tried our cone crusher at a granite mine for 8 months, which is manufactured as a result of the research and development studies taking long years, we

installed it at a company processing the materials from the stream bed. Our crusher has been working perfectly for almost 2 years.

In previous years cone crushers were not preferred with reasons like very high initial investment costs, intended use was not known in detail, no domestic manufacture, and dependancy on the foreign countries for the spare parts and services priced with foreign currency.

Actually, cone crusher shows very little abrasion in regard of its operation principle. It has a high capacity and a huge feeding size (200mm). Its end product rate is high and its unit electrical consumption is low i.e. considering the tonnage of produced material it consumes less electricity. It has competent body integrity. It is has a closed-circuit automatic lubrication system. Oil change is made once in 1000 hours and doesn't require daily maintenance, greasing and delay. Furthermore it is more productive than impact crushers in producing ballast materials.

▶ **So why did you need to manufacture cone crusher?**

▶ If you used a jaw in secondary crushing for very hard and abrasive minerals following primary crushing, capacity

would decrease but if you use impact crusher, related cost would increase. There should be a crusher to fill this gap. Since it has a high capacity, low abrasion rate as required by its operational principle and has no bearing, it is a high-strength crusher. Thus as Kensan Makine we decided to manufacture the cone crusher which has a lower initial investment cost and is manufactured domestically 100% in order to make a contribution to the national economy and to make them available to the customers at an affordable price.

▶ **Who should use the cone crushers?**

▶ We recommend the cone crusher especially to our customers who bear high palette and lining costs and lose their times when installing and maintaining them and suffer high electricity consumption and need ballast-size products.

▶ **Can you inform us on the feeding and end product sizes of the cone crusher?**

▶ We have different cavity and eccentric options and manufacture customized products also in accordance with the needs of the customer. Maximum feeding size of our KC1000 model is 200mm and output may be adjusted in seconds by hydraulic piston and control in accordance with the needs.

▶ **Could you give information on the daily maintenance and electricity consumption of the cone crusher?**

▶ Cone crusher doesn't require daily maintenance. It has a closed circuit lubrication system. Oil change is made approximately once in 1000 hours. Machine regulates its oil temperature automatically. Its electricity consumption is very low. Whereas impact crusher operated at the same capacity uses a 200-250 kw motor and is operated at 350 to 400 ampere and its star delta transition time is 1-1,5 minutes, cone crusher is operated at 160 to 200 ampere with a 132 kw motor and its star delta transition time is 4,5 seconds.

▶ **Does Kensan Makine manufacture just one model of cone crusher?**

▶ Currently our KC1000 model renders service to our customers. Our KC1400 model is ready for manufacture and will be available soon into service with a feeding size of 300 mm and a capacity of 300 t/h. Our cone crushers may be customized with different cavity and eccentric adjustments. You may get further information on models and their capacities at our web site.

▶ **Why should impact crushers be preferred in mining?**

▶ Impact crushers have high size reduction rates and are effective in the min-

erals with low Mohs hardness, have a high capacity, end product may be obtained following primary crushing with low flatness indexes.

▶ **Why should we prefer the jaw crushers in mining?**

▶ We recommend the jaw crusher for the hard and abrasive mineral ores and the mines that we don't want size reduction.

▶ **Is it so important to select the appropriate crusher?**

▶ You may lose your money by selecting inappropriate machinery in a business where you may make profit. You may need to stock overproduced products even if they are not sold, your machinery may wear off and cause great expenses and thus you may not fulfill your commitment on time, you can't compete with your rivals due to unproductive operation and the labor costs increase.

With the right choice, you may obtain a product of good quality with high capacity and appropriate cost at necessary standards, requested rates and necessary gradation. We have formed a team within the company working to develop and improve the plants. This team detects errors and make modifications by carrying out productivity analysis. ●

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