SARMA SARV AHURA

COUPLING SYSTEM ASSESSMENT

ASSESSMENT DATA SHEET

SHOKUH SAN SANAT JAVAN

SARMA SARV AHURA
INDUSTRIAL AND HVAC
CHILLERS

The Brand of New Technologies

Sarma Sarv Ahura Cooling Technology

Document Subject: COUPLING SYSTME ASSESSMENT					
Company Name	**Author**	**Customer's Name**	**Purpose of Doc.**	**Requested Prod.**	**Final approval**
Sarma Sarv Ahura ltd.	Sarma Sarv Ahura engineering group	SHOKUHSAN SANAT JAVAN	Product Data Sheet	Air Cooled Chiller	By CEO

COUPLING SYSTEM TECHNOLOGY

NOTE: THIS ASSESSMENT IS PREPARED OF SHOKUHSAN SANAT JAVAN WHICH IS LOCATED IN IRAN, BAHARESTAN INDUSTRIAL TOWN AND CAN NOT BE GENERALIZED FOR OTHER SIMILAR APPLICATIONS

Sarma Sarv Ahura Cooling Technology

GENERAL

INFORMATION

General Description

Regarding to the raw data obtained from this company, information in table 1 is validated by customer:

Table 1

Water flow rate	**40** $\frac{m^3}{h}$
Temperatue variation	Max 4^0c
Chilled water circuit type	close

The cooling system is equipped with two water circuit which one is considerd for water circulation inside the extruder and the another loop is considered for circulation of chilled water inside the heat exchangers for cooling down the process water indirectly which is shown in pic. 1

Figure 1

The customer is confronted with two main problems which are limitation in electricity consumption limitation and space limitation. According to these problems, Sarma Sarv Ahura proposes smart solution for solving these problems which is known as coupling cooling system technology. This system consists of two cooling systems which one of them is equipped with 500-liter water container for absorbing heat shock of the process water in the first stage and the another one, equipped with shell and tube system in order to increase the heat transfer rate and efficiency.

This system can optimize the electricity consumption of the cooling system more efficiently than similar systems which can be offered by other chiller manufacturers in Iran. The system is shown in figure 2

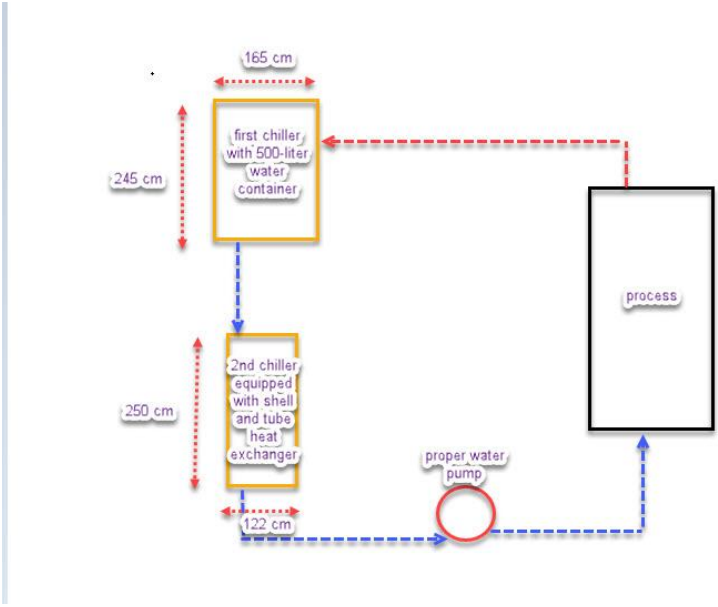

Figure 2

The water is cooled down in the first stage by 2 degrees centigrade and in the next stage another 2 degrees cooling is achievable.

The power consumption of this system can be described as table 2:

Evaporating temperature	5 c	
Condensing temperature	Cooling capacity (W)	Power input (kW)
30 c	48960	9.30
40 c	43410	10.84
50 c	37560	12.38
60 c	31500	13.86

We hardly recommend you to take advantage of this cooling system to have better cooling ability of your system.