Memsys Water Technologies GmbH
Project inquiry form

© memsys

memsys®
thermal separation processes

Please fill all fields with x in column A, fields with o are optional

	Customer / Project Information		Input Parameters
x	Customer / Project Name		
x	Location		
x	Application		
x	Requested product water capacity (distillate or feed)	m3/day	
x	Envisaged recovery rate / concentration factor	%	
	Basic application information		
x	Where does feed come from?		
x	What are the requirements for brine?		
x	Requested concentration factor		
x	What are the requirements for distillate? (drink etc)		
x	Information about volatile matters in the feed		
x	What is the product (concentrate, distillate, both)		
x	Is waste heat / process heat available, what is the possible temperature and amount for the heat flow	yes/no kW thermal, °C/°C, m3/h	
x	Is cooling water available, what is the possible temperature and amount for the heat flow	yes/no kWthermal, °C/°C, m3/h	
	Pretreatment		
x	Microfiltration	5 µm	
x	Activated Carbon (if oily substances in feed water)	yes/no ?	
x	Description on upstream preatreatment/ process installed upstream		
x	Feed temperature (from upstream process)	°C	

	Detailed water analysis of feed water	Units	Feed values	Output Requirements
x	Turbidity	NTU		
x	Colour	observation		
x	Smell	observation		
x	Sediment (not dissolved)	observation		
x	TSS (Total suspended solids)	mg/L		
x	TDS (Total dissolved solids)	mg/L		
x	COD (Chemical oxygen demand) / BOD5	mg/L		
x	pH value	pH value		
x	Surface tension	mN/m		
x	Specific gravity	g/l		
x	TOC (Total oganic carbon)	mg/L		
x	electrical Conductivity	mS/cm		
x	Total hardness			
o	Calcium hardness			
	Alkalinity		**Feed values**	**Output Requirements**
o	m - alkalinity acid capacity up to pH 4,3 (Ks 4,3)	mmol/L		
o	p - alkalinity = base capacity up to pH 8,2 (Kb 8,2)	mmol/L		
x	Silica (SiO2)	mg/L		
	Cations		**Feed values**	**Output Requirements**
x	Calcium Ca^{2+}	mg/L		
x	Magnesium Mg^{2+}	mg/L		
x	Sodium Na$^+$	mg/L		
x	Potassium K$^+$	mg/L		

			Feed values	Output Requirements
o	Manganese, Mn^+	mg/L		
x	Barium Ba^{2+}	mg/L		
x	Strontium Sr^{2+}	mg/L		
x	Bor B	mg/L		
x	Iron, Fe total	mg/L		
x	Aluminum, Al^+	mg/l		
x	Ammonium-N, NH_4^+-N	mg/L N		
	Aniones		**Feed values**	**Output Requirements**
o	Fluoride F^-	mg/L		
x	Chloride Cl^-	mg/L		
o	Bromid Br^-	mg/L		
	Borate B	mg/L		
x	Sulfate SO_4^{2-}	mg/L		
x	Carbonate CO_3^{2-}	mg/L		
x	Hydrogen Carbonate HCO_3^-	mg/L		
x	Phosphate, total	mg/L		
o	Ortophosphate (als PO_4^{3-})	mg/L		
o	Nitrit NO2-N	mg/l		
o	Nitrat NO3--N	mg/l		
	Heavy metals and other elements		**Feed values**	**Output Requirements**
o	mercury Hg	mg/l		
o	Cadmium Cd	mg/l		
o	Thallium Tl	mg/l		
o	Antimon Sb	mg/l		
o	Lead Pb	mg/l		
o	Arsenic As	mg/l		
o	Chrome Cr	mg/l		
o	Cobalt Co	mg/l		
o	Copper Cu	mg/l		
o	Nickel Ni	mg/l		
o	Vanadium V	mg/l		
o	Tin Sn	mg/l		
	Contents in feed that could affect membrane operation	**ppm**	**Substance**	
x	Solvents			
x	Benzole, Toluole			
x	Surfactants / Detergens			
x	Long chain hydrocarbons (oils)			
x	chlorine gas			
	Other infos on feed			
o	Toxicity			
o	volatile components	ppm		
o	Boiling point elevation	K		