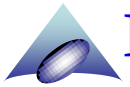
川崎GICオンライン交流会
2021年5月31日

The Introduction of the PolymerFlocculants



MT AquaPolymer,Inc.

～Today's Agenda～

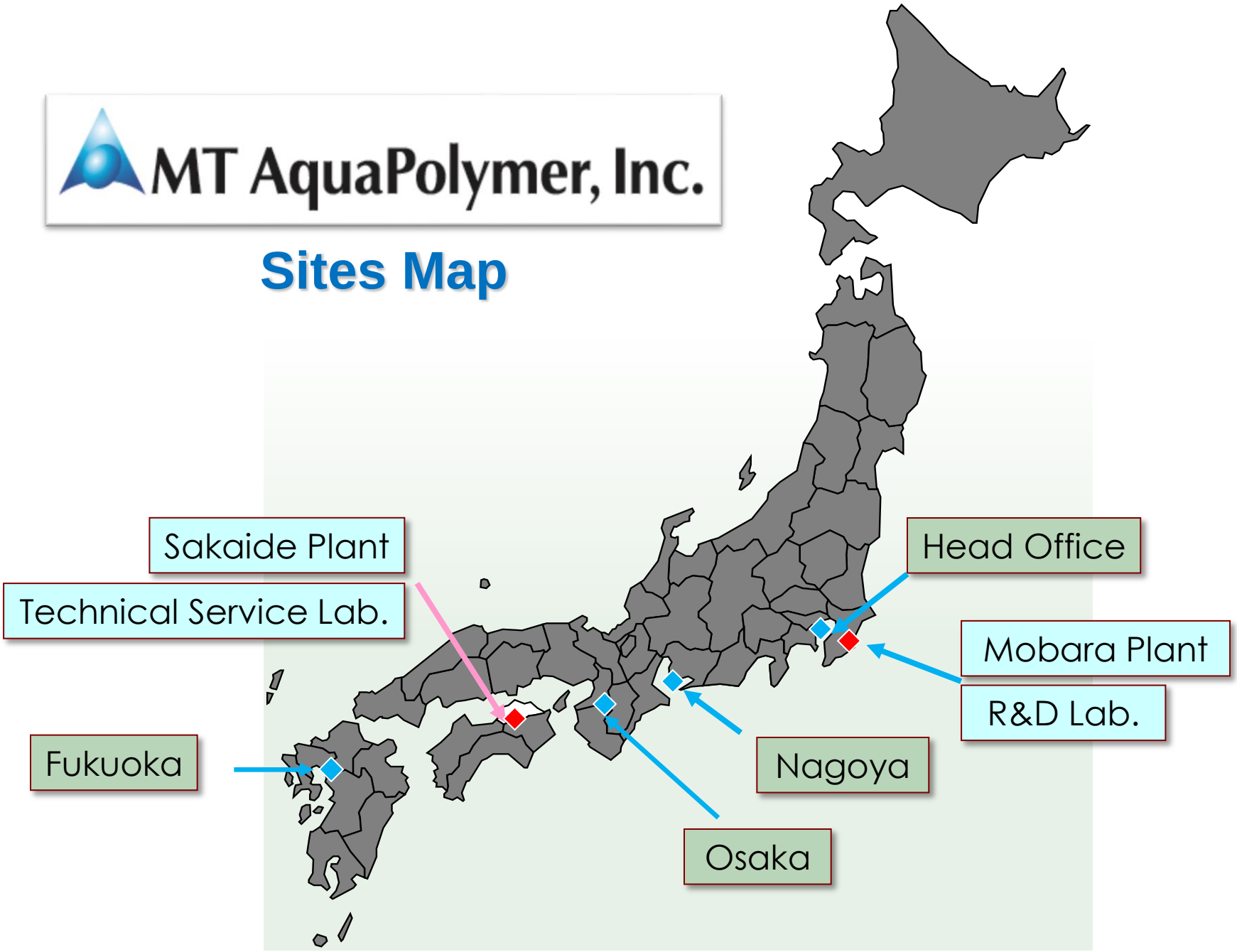
1） The History of MTAP
2） What is Polymer flocculants?
3） What is flocculation?
4） Applied wastewaters for polymer flocculants
5） Process of applied Polymer flocculants

1）The History of MTAP

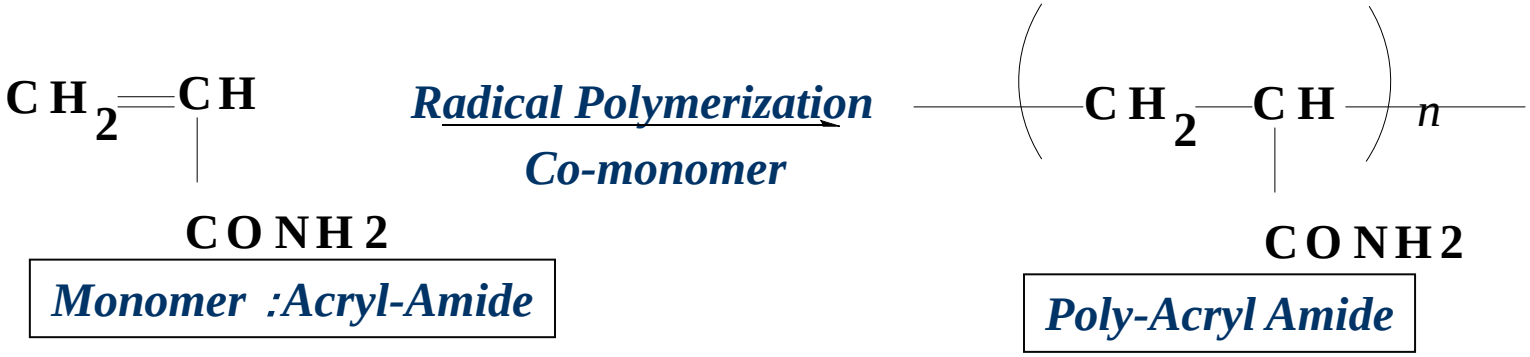
	TOAGOSEI	Mitsui Chemicals
1971	Start the Business	
1976	Sakaide Factory (Powder)	JV with American Cynamid (Mitsui Cynamid)
1978		Mobara Factory (Powder)
1991	Sakaide Factory (Cationic Monomer)	
1994		Name changed to Mitsui Cytec
1997		Mobara Factory (Emulsion)
2003		Mitsui Chemicals AquaPolymer by acquiring business from Mitsui Cytec
2006	**MT AquaPolymer, Inc**	

MT AquaPolymer, Inc.

Sites Map



2）What is Polymer flocculants?



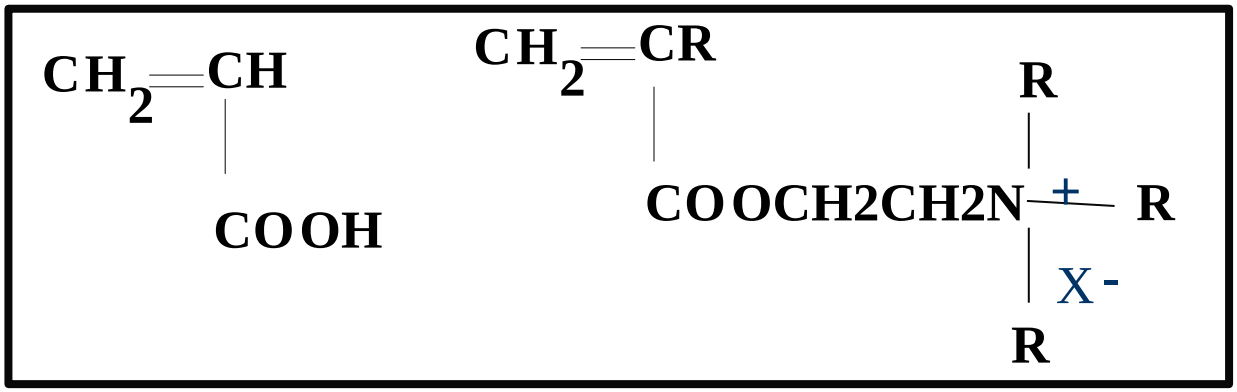
Monomer :Acryl-Amide

Poly-Acryl Amide

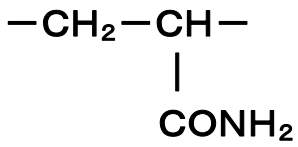
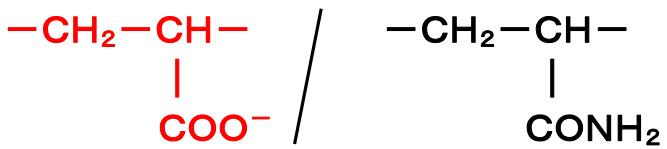
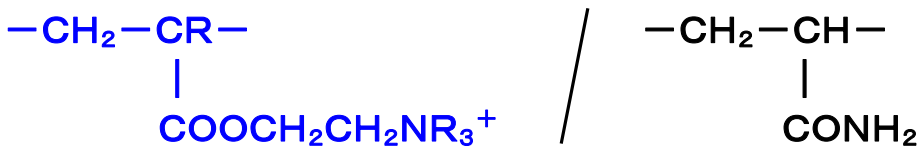
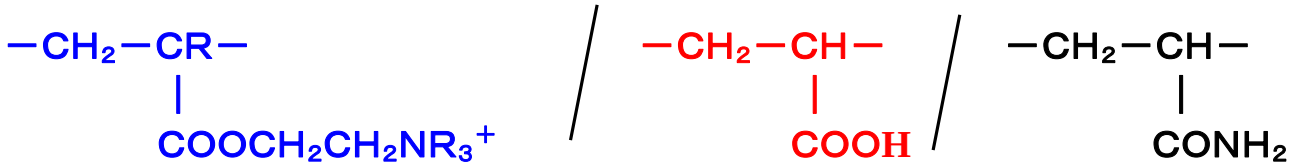
Flocculation has three components;

i)Hydogen bonding
ii)Cross-linkage
iii)Neutralization

◆Co-monomer

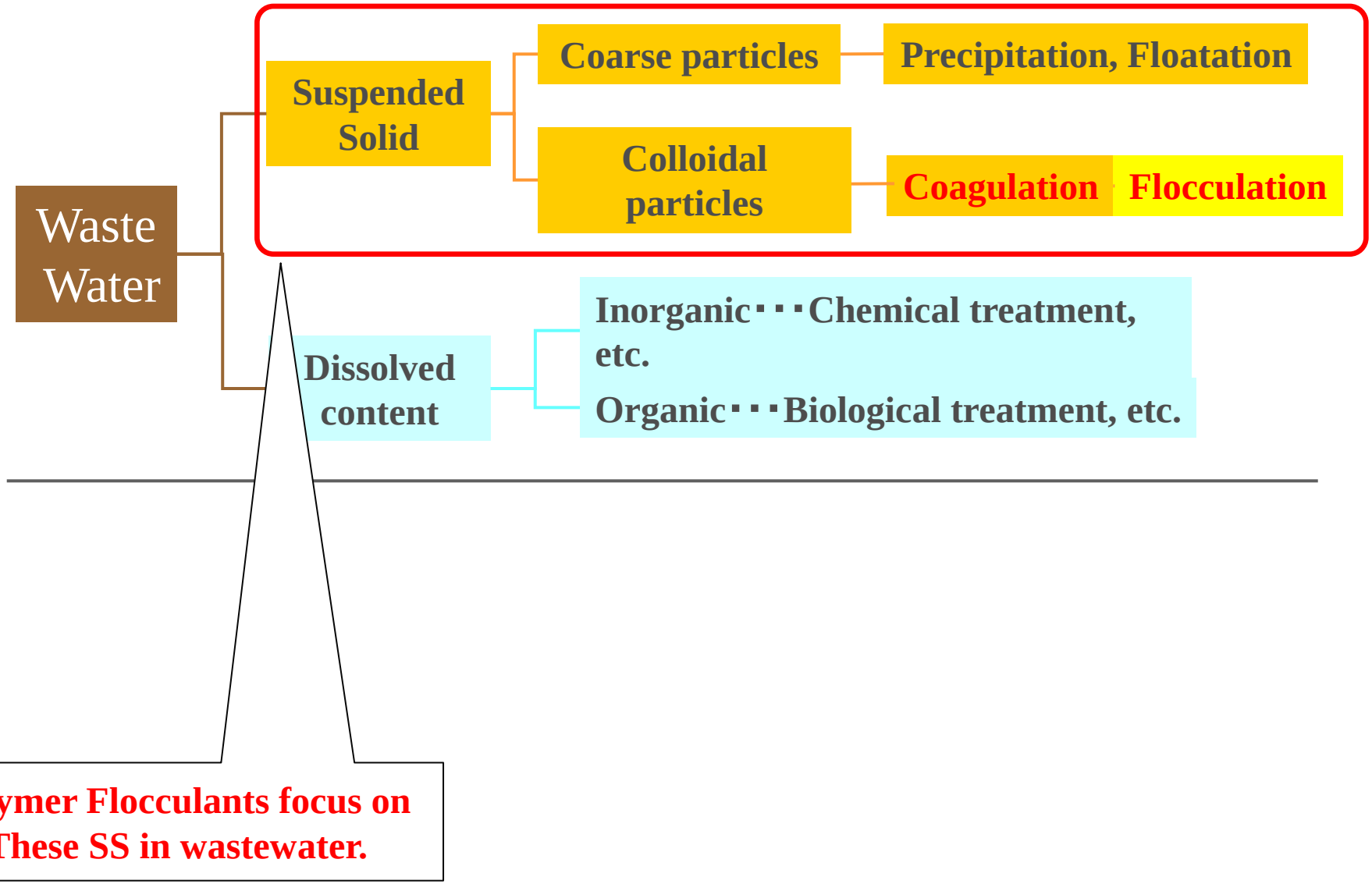


The Chemical Structure for Polymer Flocculant

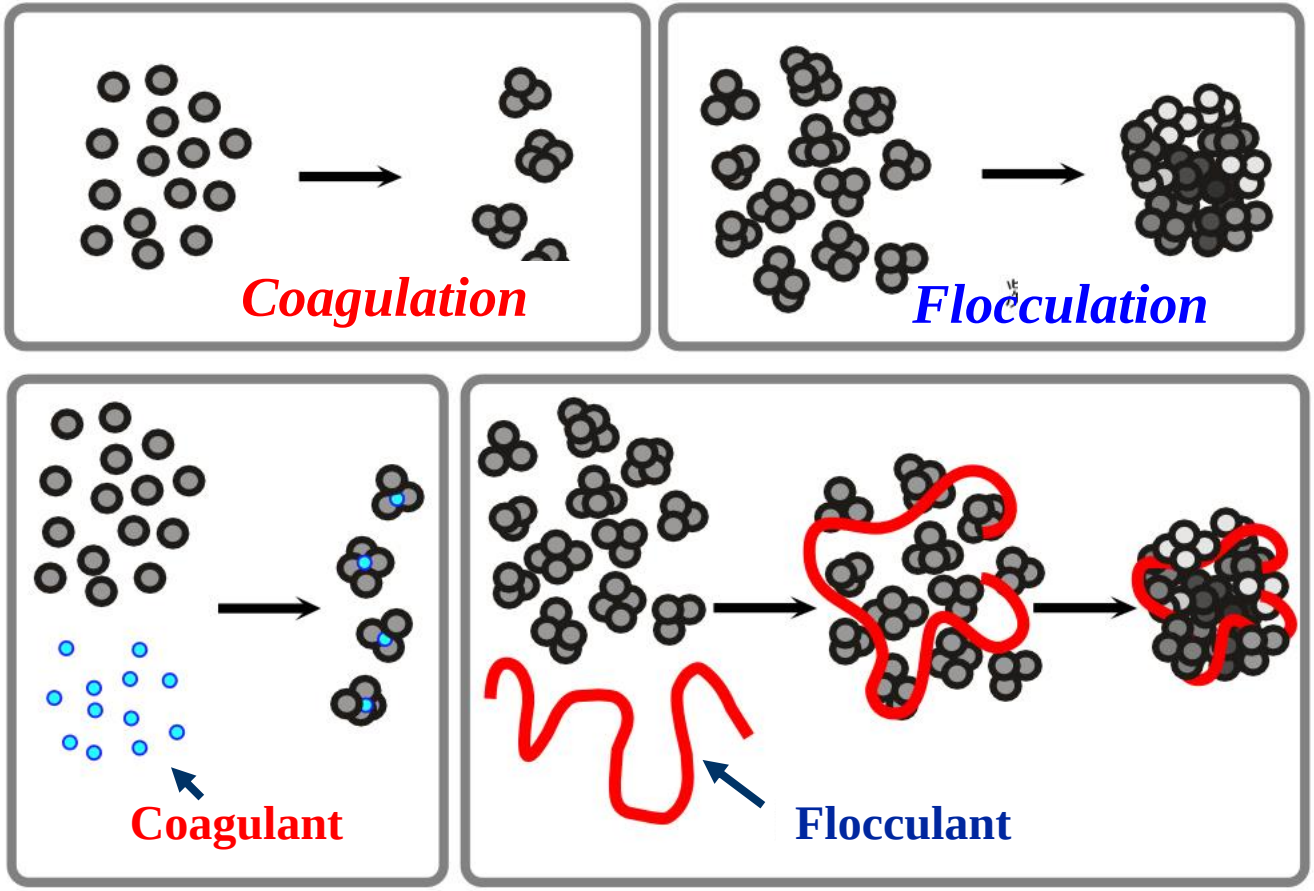
	構造単位
Nonion	
Anion	
Cation	
Amphoteric	

3)What is the flocculation?

The content of the wastewater



The model of Coagulation and Flocculation



Expected Merits for using Polymerflocculant

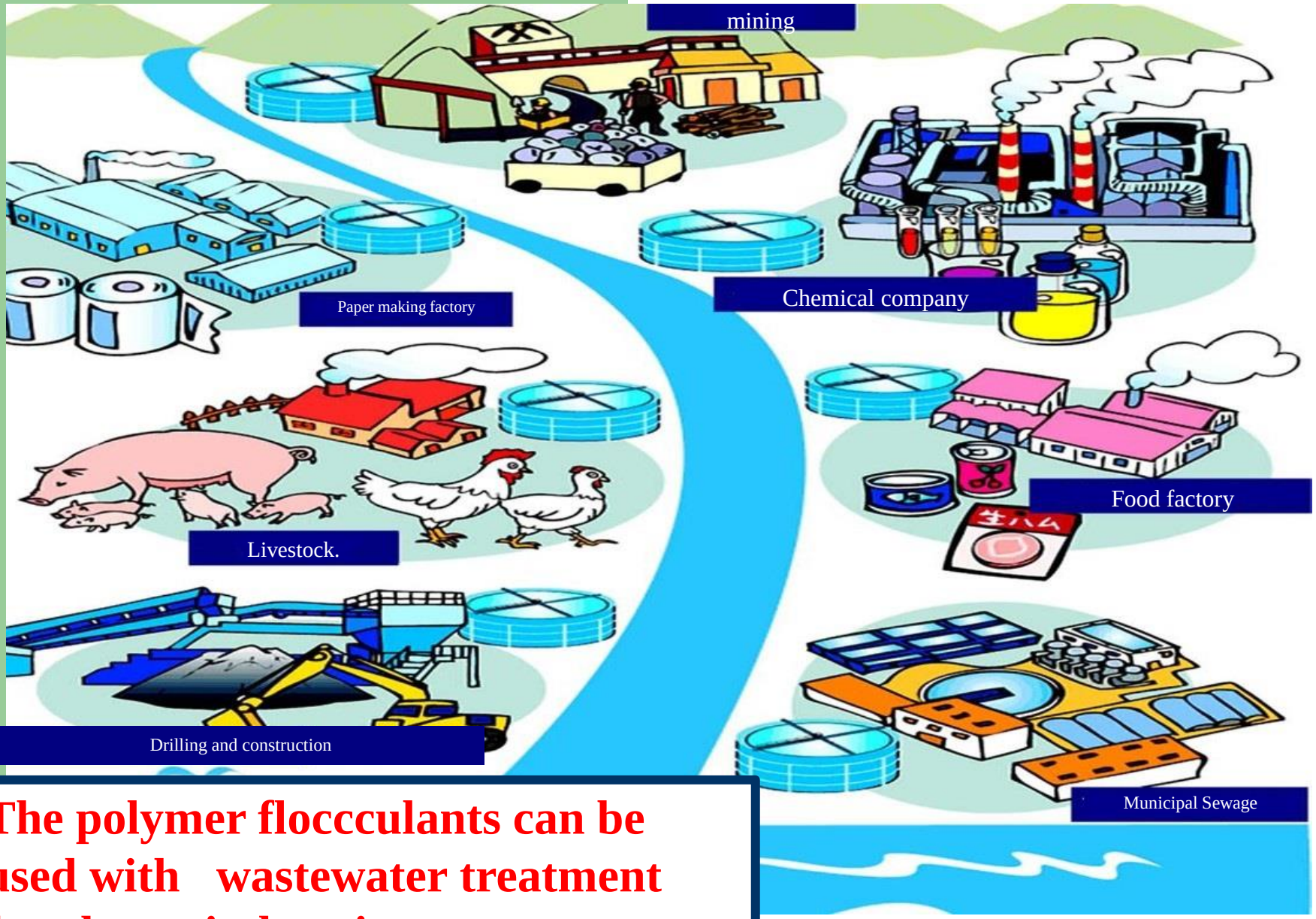
If you select and use Polymerflocculant which is suitable
for wastewater and process,
Expected Merits can be gained as followed;

1） Increase of recovery of total solid and suspended solid from wastewater

2） Improvement of turbidity of wastewater

3） Reduction of the moisture content dewatering cake
and convert to energy and organic fertilize.

4）Applied wastewaters for polymer flocculants



The polymer floccculants can be used with wastewater treatment for almost industries.

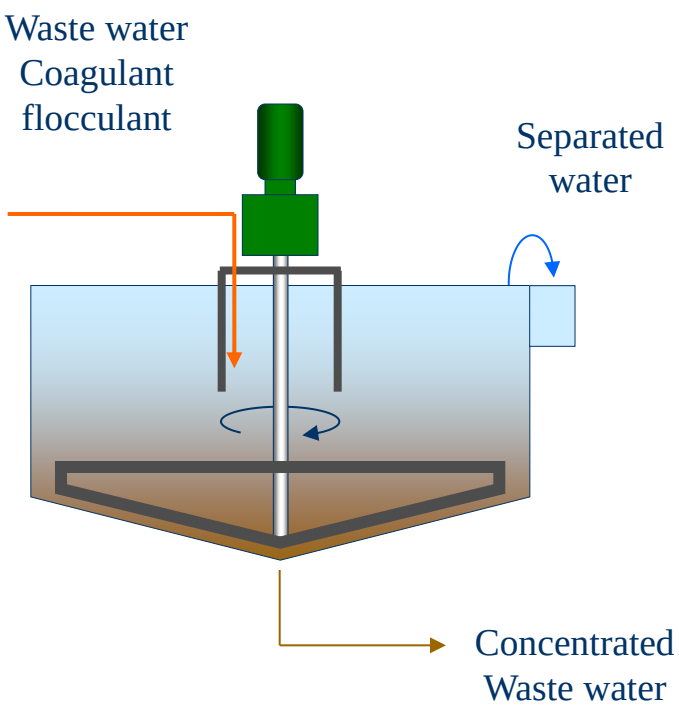
The Application of polymerflocculnat for wastwaters

Polymer flocculant	Application for the wastewater	The kind of wastewater
Nonion Anion	Inorganic wastewater (main) organic Wastewater (co-use with Cation and Amphoteric)	/ Mining / drilling and construction civil-engineering / Metal smelting / Portable water / Primary treatment of Municipal Sweage, Chemical ,food, paper making plant
Cation Amphoteric	Organic wastewater	/ Municipal Sweage / Paper making plant / Chemical company / Livestock wastewater / Beer plant / Any other organic wastewater

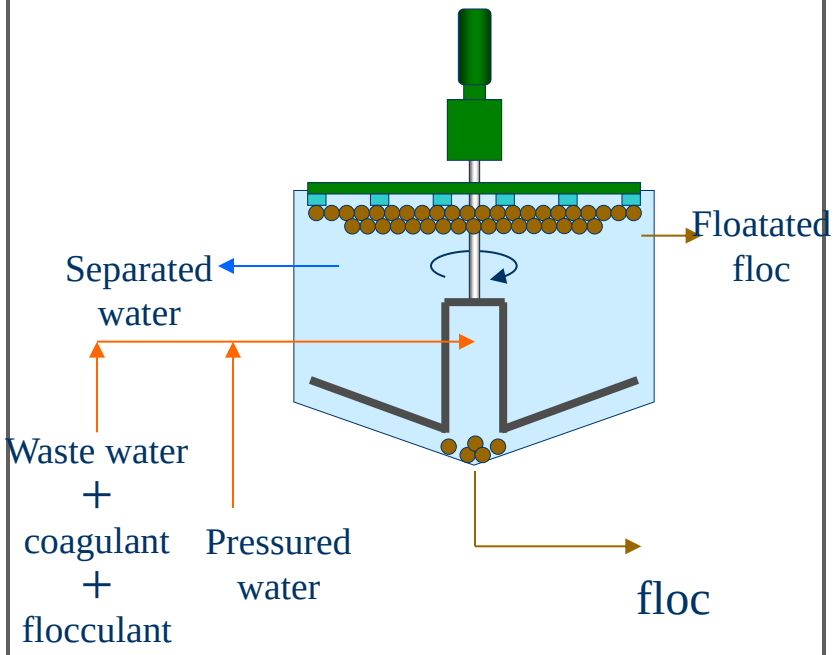
5) Process of applied Polymer flocculants

Sedimentation process (Thickener Floatator)

Thickener

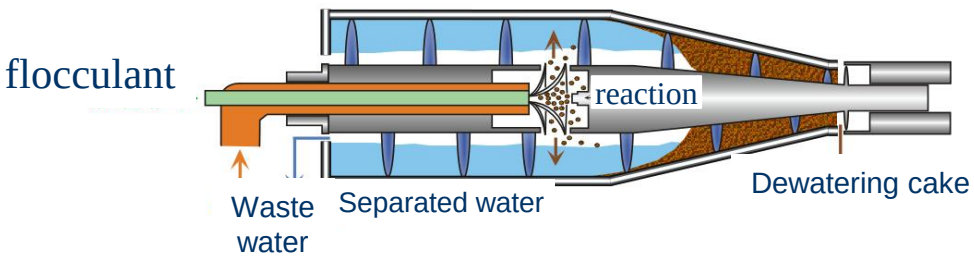


Floatator



Dewatering Machine

Screw Decanter



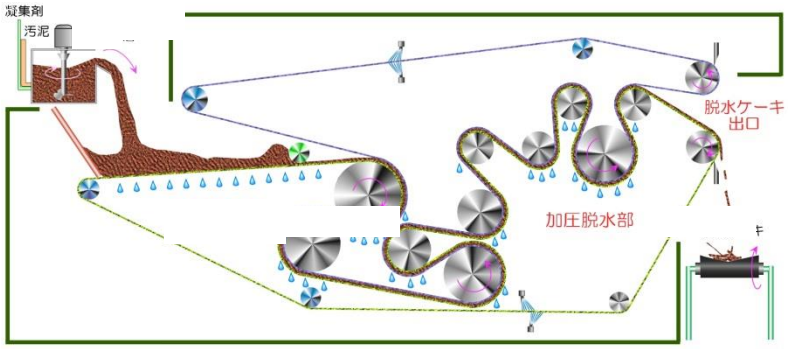
-the amount of treatment is biggest in every dewatering machines.

-the polymer flocculant needs to be reacted quickly to make flocculation .

-The floc can be strong enough for shear stress of Screw decanter.

-multicipal sewage

Belt press

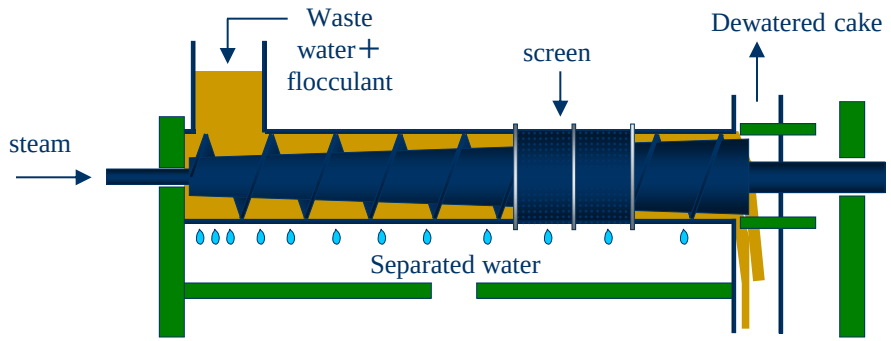


-The rate of the filtration needs to be fast.

-multicipal sewage ,activated sludge,

-Human waste.

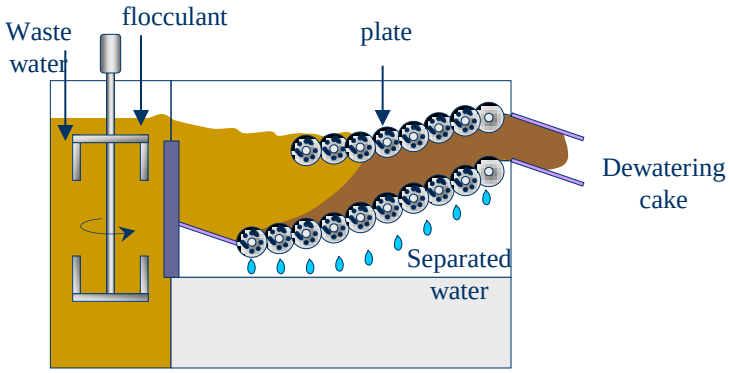
Screw press



-The floc can be strong enough for shear stress of Screw.

-Paper making ,Food plant.

Multi plate



-compact size

-The floc size need to be big

-Food plant, pig farm waste water.

~Thank you for your kind attendance~