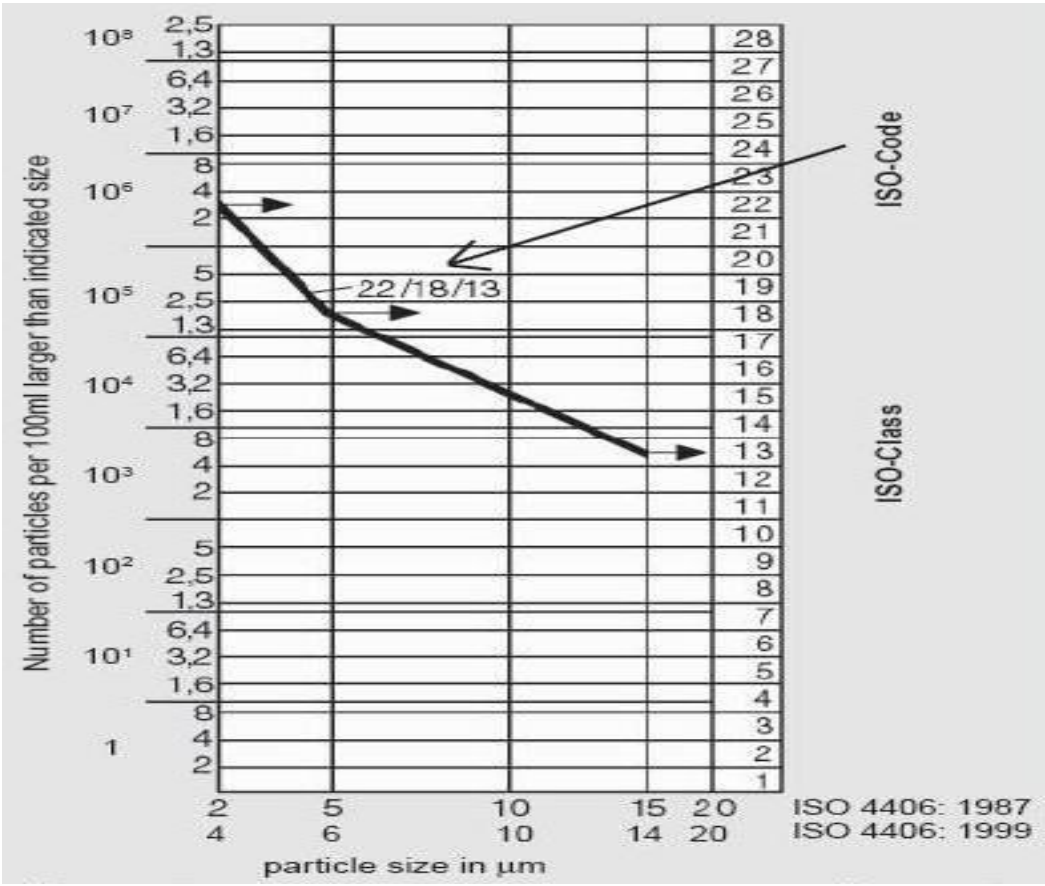
Understanding Oil Cleanliness

Oil is at the heart of most manufacturing equipment. This oil needs to be kept in good condition free from the contamination of solid particles and water. Maintaining the oil in healthy condition is something that is often overlooked but will prevent costly downtime and the replacements of pumps, valves, cylinders and seals.

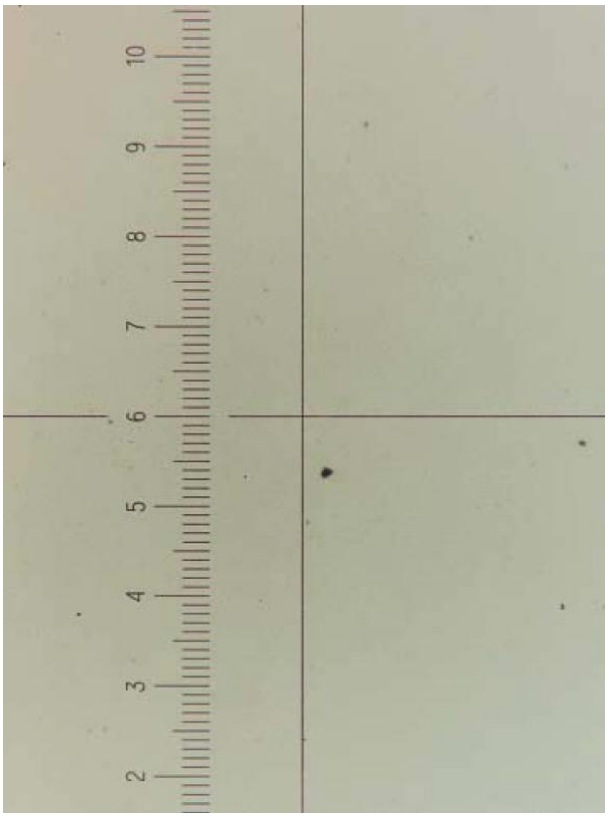
Determination of filtration rating and efficiency			
NAS 1638 NAS-5-15µ	**ISO 4406** ISO >4µm/6 µm /14 µm	**Recommended filtration rating**	**Type of hydraulic system and application**
< 4	15/13/10	2 - 3 µm	Laboratory and aerospace technology, servo hydraulic systems
< 6	17/15/12	3 - 5 µm	High quality industrial hydraulics, electromagnetic control valves, proportional technology, high pressure systems, lubrication systems
< 8	19/17/14	5 - 10 µm	Industrial hydraulics, medium pressure systems, low pressure systems
< 10	21/19/16	10 - 20 µm	Medium pressure hydraulics in general, medium-sized systems, low pressure systems with large component clearances and low requirements for component wear protection, also high pressure water hydraulic systems with high levels of coarse contamination



Oil Solution
S.K.S INTERSUPPLY.CO.,LTD

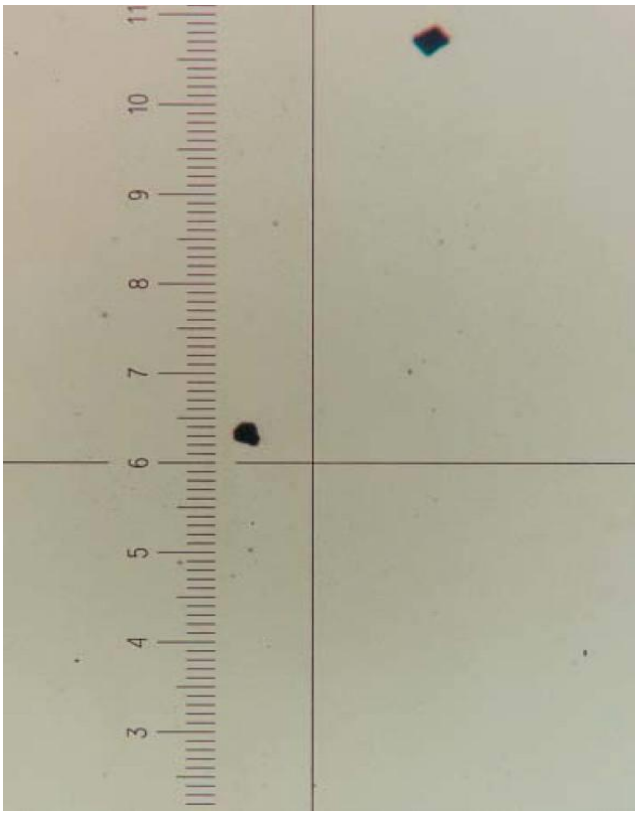
Comparison photograph for fluid contamination class Magnification: x100 1 scale mark = 10 µm

Class 3



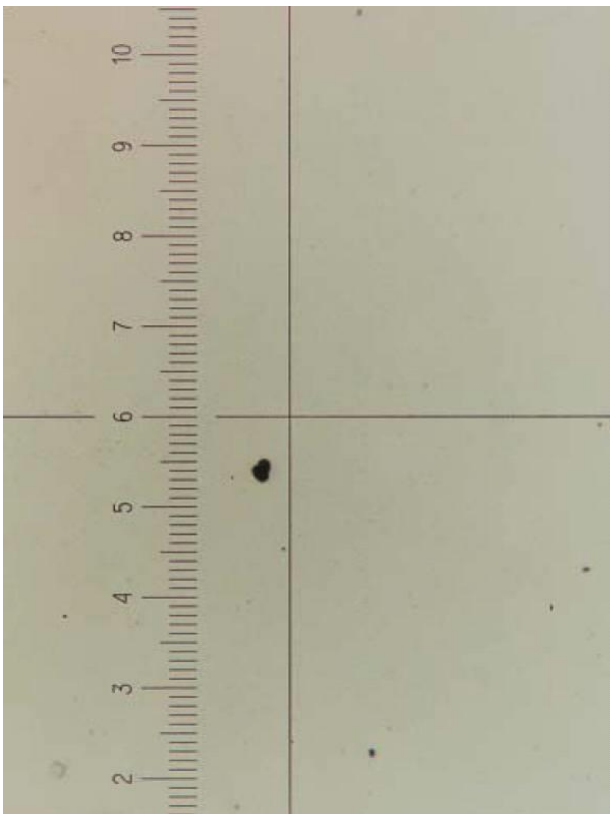
NAS 1638 Class 3; ISO 4406: Class 14/12/9

Class 5



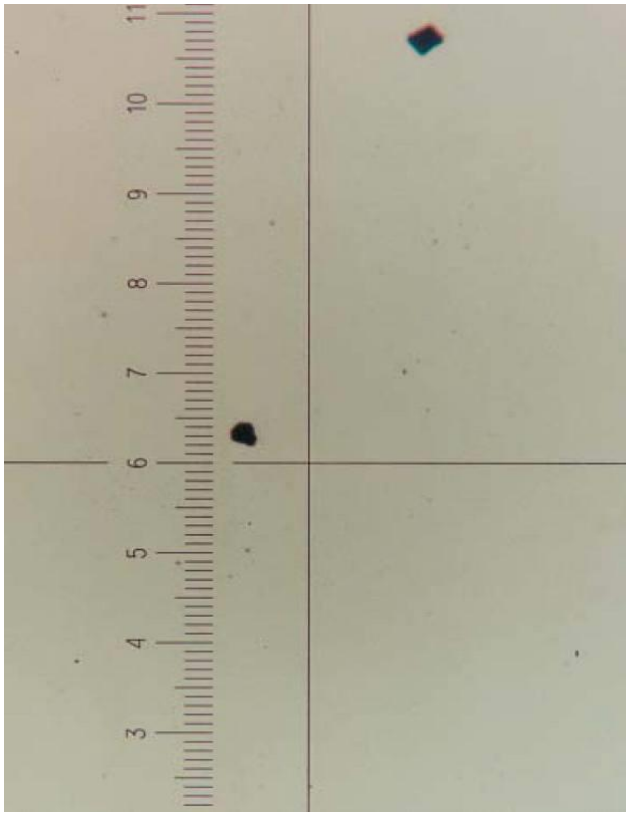
NAS 1638 Class 5; ISO 4406: Class 16/14/11

Class 4



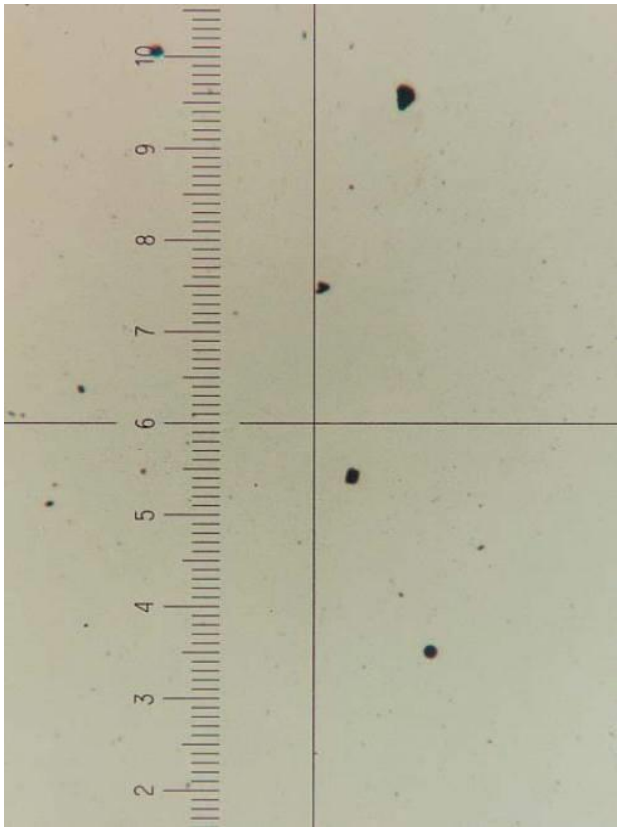
NAS 1638 Class 4; ISO 4406: Class 15/13/10

Class 6



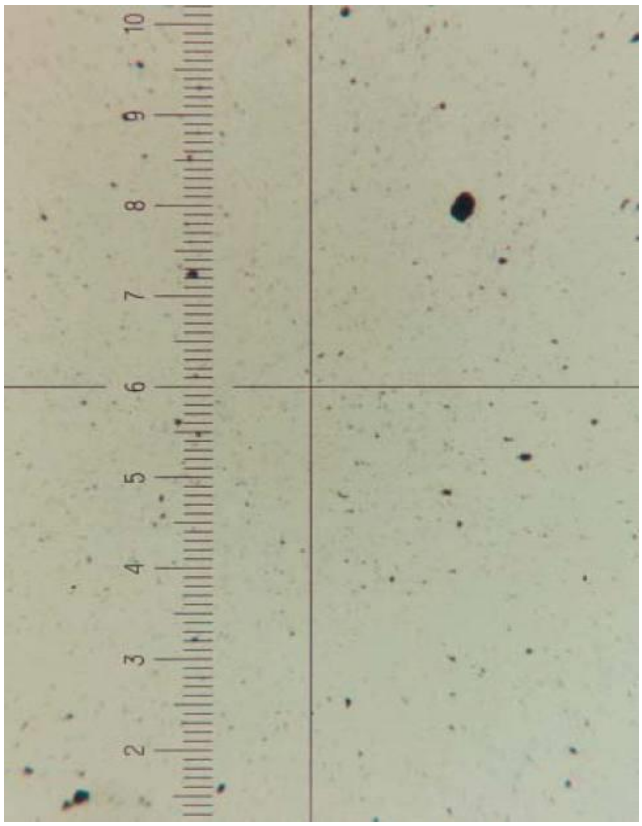
NAS 1638 Class 6; ISO 4406: Class 17/15/12

Class 7



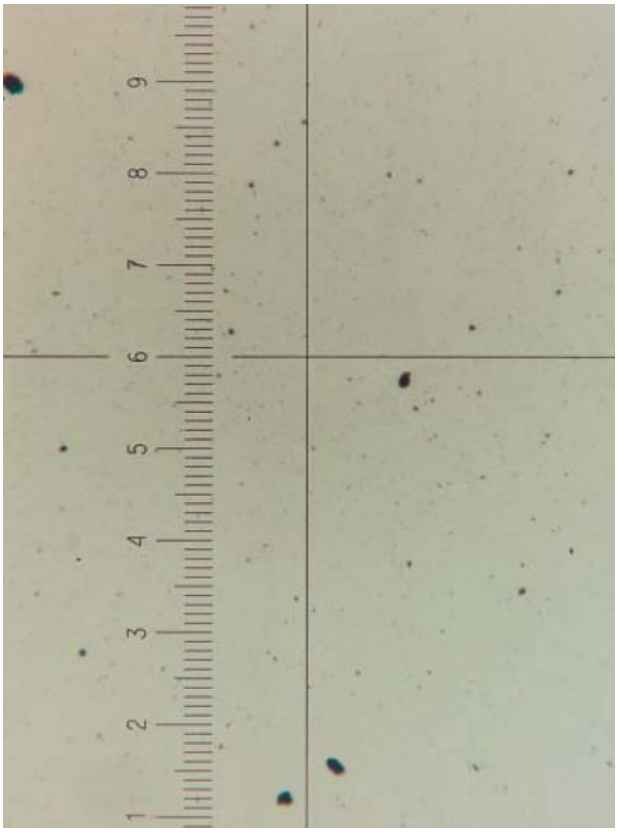
NAS 1638 Class 7; ISO 4406: Class 18/16/13

Class 9



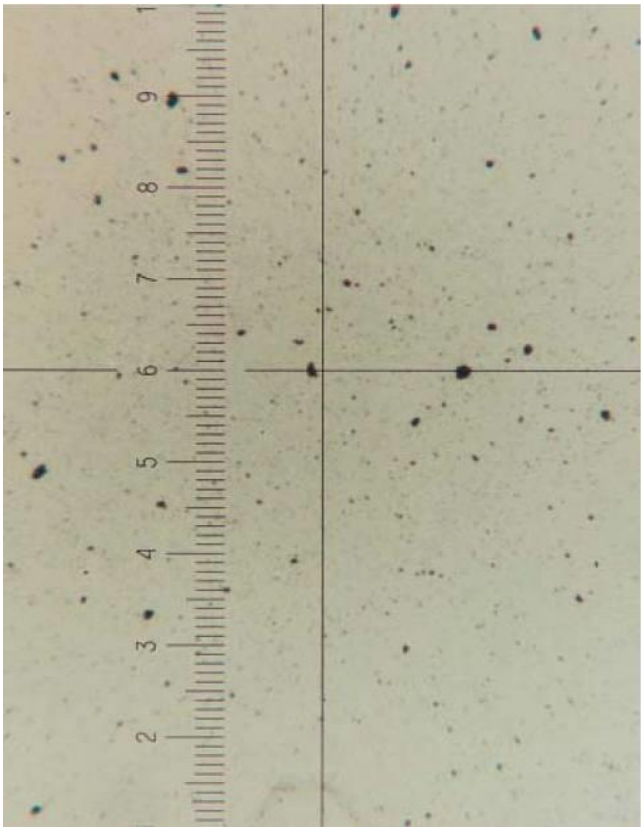
NAS 1638 Class 9; ISO 4406: Class 20/18/15

Class 8



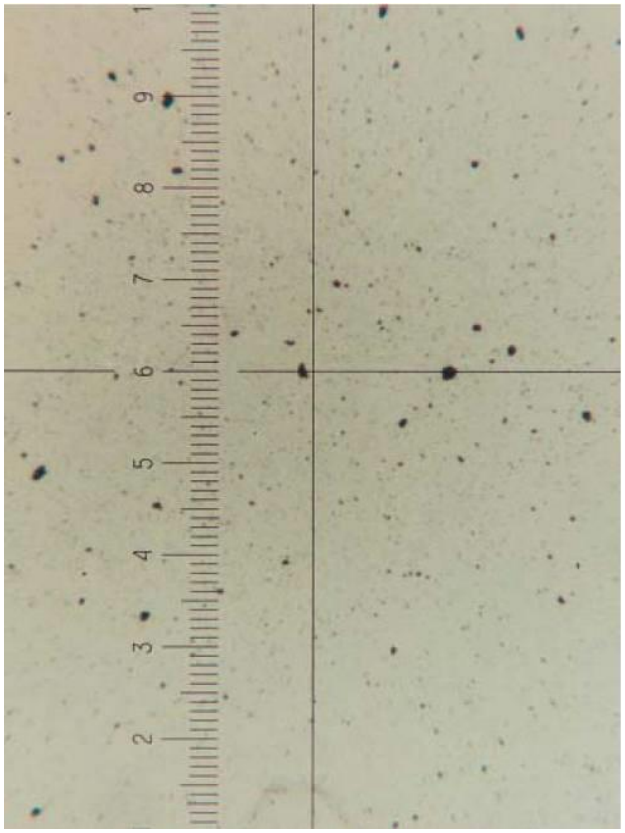
NAS 1638 Class 8; ISO 4406: Class 19/17/14

Class 10



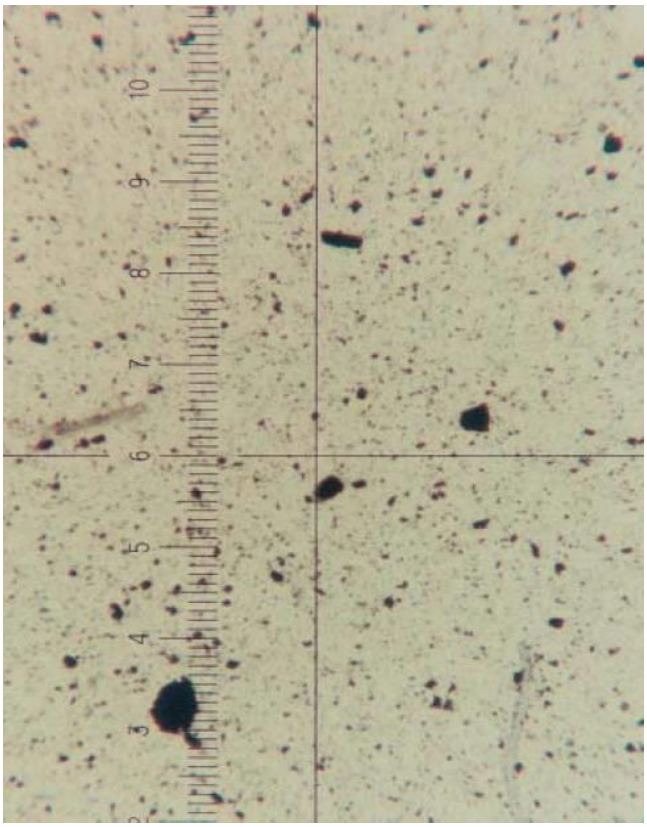
NAS 1638 Class 10; ISO 4406: Class 21/19/16

Class 11



NAS 1638 Class 10; ISO 4406: Class 22/20/17

Class 12



NAS 1638 Class 12; ISO 4406: Class 23/21/18