CLAIMS

[Claim 1] A maintenance management system which manages maintenance of an air conditioning machine, comprising:

a maintenance assist apparatus which assists with the maintenance of the air conditioning machine; and

a maintenance terminal apparatus carried by a maintenance person who implements a cleaning service on the air conditioning machine, wherein

the maintenance assist apparatus comprises:

an image registration unit to register in cleaning service information where usage status of the cleaning service on the air conditioning machine is set, a dirt~~filter~~ image indicating dirt severeness~~obtained by the maintenance person photographing a filter~~ of the air conditioning machine; and

a registration confirmation unit to determine whether or not the dirt~~filter~~ image has been registered in the cleaning service information, when a completion report which reports completion of the cleaning service is acquired~~received~~ from the maintenance terminal apparatus~~person~~, output to the maintenance terminal apparatus, a completion confirmation notification which notifies that the completion of the cleaning service has been confirmed, when it is determined that the dirt~~filter~~ image has been registered, and output to the maintenance terminal apparatus, a registration warning notification which prompts registration of the dirt~~filter image~~, when it is determined that the dirt~~filter~~ image has not been registered.

[Claim 2] The maintenance management system according to claim 1, wherein the dirt image is a filter image obtained by photographing a filter of the air conditioning machine.

[Claim 3~~2~~] The maintenance management system according to claim 2~~1~~, the maintenance terminal apparatus comprising

a photographing assist unit to facilitate photographing the filter by enabling a filter frame included in the filter to be positioned at a specific mark, thereby assisting in photographing the filter.

[Claim 4~~3~~] The maintenance management system according to claim 3~~2~~, wherein

the photographing assist unit facilitates photographing the filter by enabling a corner part of the filter frame included in the filter to be positioned at the specific mark.

[Claim 5~~4~~] The maintenance management system according to any one of claims 2~~1~~ to 4~~3~~ comprising

a dirt evaluation unit to determine the dirt severeness of the filter based on the filter image registered in the cleaning service information, and register the dirt severeness in the cleaning service information.

[Claim 6~~5~~] The maintenance management system according to claim 5~~4~~, wherein

the image registration unit registers the filter image obtained by photographing the filter provided with a character or a symbol, and

the dirt evaluation unit determines the dirt severeness based on an outcome of reading the character or the symbol included in the filter image.

[Claim 7~~6~~] The maintenance management system according to claim 5~~4~~ or 6~~5~~, wherein

the image registration unit registers the filter image obtained by photographing the filter where specific solvent has been sprayed on dirt, and

the dirt evaluation unit determines the dirt severeness based on a state of the dirt after the solvent having been sprayed, included in the filter image.

[Claim 8~~7~~] The maintenance management system according to any one of claims

54 to 76, wherein

the dirt evaluation unit determines the dirt severeness based on a change of color of the dirt on the filter included in the filter image.

[Claim 98] The maintenance management system according to any one of claims 54 to 87, wherein

the cleaning service information is included in lifestyle information indicating a lifestyle of a user who uses the air conditioning machine, and

the dirt evaluation unit calculates correlation data between the lifestyle of the user and the dirt severeness.

[Claim 109] The maintenance management system according to any one of claims 54 to 98, wherein

the filter image includes an image of a filter before the cleaning service is implemented, and an image of a filter after the cleaning service is implemented.

[Claim 1110] A maintenance assist apparatus which communicates with a maintenance terminal apparatus carried by a maintenance person who implements a cleaning service on an air conditioning machine, and which assists with maintenance of thean air conditioning machine, comprising:

an image registration unit to register in cleaning service information where usage status of the cleaning service on the air conditioning machine is set, a dirtfilter image indicating dirt severenessobtained by a maintenance person, who implements the cleaning service on the air conditioning machine, photographing a filter of the air conditioning machine; and

a registration confirmation unit to determine whether or not the dirtfilter image has been registered in the cleaning service information, when a completion report which reports completion of the cleaning service is acquiredreceived from the maintenance

terminal apparatusperson, output a completion confirmation notification which notifies that the completion of the cleaning service has been confirmed, when it is determined that the dirtfilter image has been registered, and output a registration warning notification which prompts registration of the dirtfilter image, when it is determined that the dirtfilter image has not been registered.

[Claim 1211] A maintenance management method used forby a maintenance management system which manages maintenance of an air conditioning machine and comprises:

a maintenance assist apparatus which assists with the maintenance of the air conditioning machine; and

a maintenance terminal apparatus carried by a maintenance person who implements a cleaning service on the air conditioning machine, the maintenance management method comprising:

registering, by an image registration unit of the maintenance assist apparatus, in cleaning service information where usage status of the cleaning service on the air conditioning machine is set, a dirtfilter image indicating dirt severenessobtained by the maintenance person, who implements the cleaning service on the air conditioning machine, photographing a filter of the air conditioning machine; and

determining, by a registration confirmation unit of the maintenance assist apparatus, whether or not the dirtfilter image has been registered in the cleaning service information, when a completion report which reports completion of the cleaning service is acquiredreceived from the maintenance terminal apparatusperson, outputting to the maintenance terminal apparatus, a completion confirmation notification which notifies that the completion of the cleaning service has been confirmed, when it is determined that the dirtfilter image has been registered, and outputting to the maintenance terminal

apparatus, a registration warning notification which prompts registration of the dirtfilter image, when it is determined that the dirtfilter image has not been registered.

[Claim 1312] A maintenance management program for a maintenance management system which manages maintenance of an air conditioning machine and ,comprises:

a maintenance assist apparatus which assists with the maintenance of the air conditioning machine; and

a maintenance terminal apparatus carried by a maintenance person who implements a cleaning service on the air conditioning machine, the maintenance management programwhich causinges a computer to execute:

an image registration process of registering in cleaning service information where usage status of the cleaning service on the air conditioning machine is set, a dirtfilter image indicating dirt severenessobtained by a maintenance person, who implements the cleaning service on the air conditioning machine, photographing a filter of the air conditioning machine; and

a registration confirmation process of determining whether or not the dirtfilter image has been registered in the cleaning service information, when a completion report which reports completion of the cleaning service is acquiredreceived from the maintenance terminal apparatusperson, outputting to the maintenance terminal apparatus, a completion confirmation notification which notifies that the completion of the cleaning service has been confirmed, when it is determined that the dirtfilter image has been registered, and outputting to the maintenance terminal apparatus, a registration warning notification which prompts registration of the dirtfilter image, when it is determined that the dirtfilter image has not been registered.