Gasuketto Gairon" ("New Gaskets and Gasketing Technology"), NIPPON VALQUA INDUSTRIES, May 10, 2015, pp. 145-176

Summary of Invention

Technical Problem

[0005] Now, a piping coupling or a connection of a piping to a facility, such as a pump, etc., is installed inside a factory, such as a plant, etc., and therefore sealing work must be performed at that site. For an engineer involved in sealing work, there is a way to acquire the necessary skills by receiving on-the-job training and work education by an external educational institution. However, such education alone is not necessarily sufficient.

Although in general, sealing work must be learned through both classroom learning and practical training, there is a limit to practical training using equipment in operation onsite and it cannot be denied that the group training at a training center also has restrictions in terms of time and distance.

Sealing work incorporates a wide variety of practical training, such as flange tightening training, torque sensation training, sealing performance training, compression failure training, flange/bolt/washer effect observation training, piping rack training, etc. There is also an issue that there are different facilities according to each site an engineer is in charge of and the engineer involved in the facilities is required to have skills required for the functions of the facilities.

[0006] An object of the present invention is thus to lighten restrictions in terms of time and distance and achieve speedup of practical training appropriate for a site of sealing work, etc., in view of the above issues.

Summary

[0006a] According to an aspect, the present disclosure refers to a training system comprising: an input unit for inputting at least a training item or site information; an information processing unit that generates equipment unit selection information selecting

at least one training equipment unit from among a plurality of the training equipment units in accordance with the training item, generates base unit selection information which is on a base unit necessary for installing the training equipment unit or on the base unit and an extension base unit coupled to the base unit, and generates assembly information of a training system which includes the training equipment unit and the base unit or includes the training equipment unit, the base unit and the extension base unit; and an information presenting unit presenting any of the equipment unit selection information, the base unit selection information, or the assembly information.

[0006b] According to another aspect, the present disclosure refers to a training program executed by a computer to cause the computer to implement functions comprising: an input function for at least a training item or site information; a function of generating, in accordance with the training item, equipment unit selection information on at least one training equipment unit, generating, in accordance with the site information, base unit selection information which is on a base unit or on the base unit and an extension base unit, and generating assembly information of a training system which includes the training equipment unit and the base unit or includes the training equipment unit, the base unit and the extension base unit; and a function of presenting any of the equipment unit selection information, the base unit selection information, or the assembly information.

[0007] To achieve the above object, one example of a training system according to the present disclosure is a training system movable to a training site for enabling training, the training system including at least one training equipment unit; and a base unit including an installation portion for installing the training

equipment unit, the training equipment unit being attachable to and detachable from the installation portion, at least one extension base units being couplable to a peripheral edge portion. During training, at least the training equipment unit is attachable to and detachable from the base unit installed at the training site.

[0008] In the training system, the training equipment unit may include at least any of a flange tightening equipment unit, a torque sensation equipment unit, a sealing performance training equipment unit, a compression failure training equipment unit, a flange/bolt/washer effect observation training equipment unit, and a piping rack training equipment unit.

In the training system, the base unit or the extension base unit may, together with a frame and a bridging member bridgingly intersecting the frame, constitute a floor surface.

In the training system, a fitting portion fitting together the base unit and the extension base unit, or a fitting portion fitting together the extension base unit and another coupling base unit may be included, or a fitting portion fitting together the base unit and the extension base unit, or at least one coupling member coupling the extension base unit and another coupling base unit may be included.

In the training system, the training equipment unit may include a plurality of base stand portions and the base unit may include a plurality of the installation portions that support the respective base stand portions.

In the training system, the extension base unit or another coupling base unit may be coupled to the base unit based on a training area assumed on dimensions of the training site, the number of trainees, or the number of the training equipment units installed and used for the training.

[0009]To achieve the above object, one example of a training system according to the present disclosure includes an input unit for inputting at least a training item or site information; an information processing unit that generates equipment unit selection

information selecting at least one training equipment unit from among a plurality of the training equipment units in accordance with the training item, generates base unit selection information on a base unit necessary for installing the training equipment unit or, where necessary, an extension base unit coupled to the base unit, and generates assembly information of which an assembly includes the training equipment unit and the base unit or, where necessary, assembly information of which an assembly includes the extension base unit; and an information presenting unit presenting any of the equipment unit selection information, the base unit selection information, or the assembly information.

[0010]To achieve the above object, one example of a training program according to the present disclosure is a training program executed by a computer to causing the computer to implement functions including an input function for at least a training item or site information; a function of generating, in accordance with the training item, equipment unit selection information on at least one training equipment unit, generating, in accordance with the site information, base unit selection information on a base unit or, where necessary, an extension base unit, and generating assembly information of which an assembly includes the training equipment unit and the base unit or, where necessary, assembly information of which an assembly includes the extension base unit; and a function of presenting any of the equipment unit selection information, the base unit selection information, or the assembly information.

Advantageous Effects of Invention

[0011]By the training system of the present disclosure, the following effects are obtained.

(1) The training equipment units can be delivered from a fixed facility of a specific training center, etc., to the training site of a user and assembled at the site and work training and work practice suited to the user can be performed and therefore convenience of work training is improved.

(2) For the work training, the necessary training can be

performed as long as an installation area for the training equipment unit and the base unit is available and the training area can be extended by coupling the extension base unit to the base unit.

(3) At the training site, a concrete or asphalt pavement is not required as long as a flat surface can be secured and an ideal and firm training area can be realized with just the base unit or with the base unit and the extension base unit.

(4) The training equipment unit can be adjusted to be of a size and scale corresponding to a user facility that is an object of sealing work, enabling construction of a highly convenient training system.

[0012] By the training system of the present disclosure, a training system that is in accordance with the training item and the training site can be constructed and a training system that enables performing of sealing work required by the user and is efficient can be realized.

[0013] By the training program of the present disclosure, together with the training equipment unit, the base unit, and the extension base unit, unit information and assembly information that are in accordance with the training item and the training site can be obtained from information expressing the respective units to enable selection and design of training content to be realized freely and efficiently and enable training content and training information necessary to the user to be provided accurately and promptly.

Brief Description of Drawings

[0014] FIG. 1 is an exploded perspective view showing a training system according to an embodiment.

FIG. 2 is a diagram showing a flange tightening training system according to Example 1.

FIG. 3 is an exploded perspective view showing a training head of a training equipment unit.

FIG. 4A is a sectional view showing the training head covered with a protective cover and FIG. 4B is a plan view showing a connector

CLAIMS

[Claim 1]

A training system comprising:

an input unit for inputting at least a training item or site information;

an information processing unit that generates equipment unit selection information selecting at least one training equipment unit from among a plurality of the training equipment units in accordance with the training item, generates base unit selection information which is on a base unit necessary for installing the training equipment unit or on the base unit and an extension base unit coupled to the base unit, and generates assembly information of a training system which includes the training equipment unit and the base unit or includes the training equipment unit, the base unit and the extension base unit; and

an information presenting unit presenting any of the equipment unit selection information, the base unit selection information, or the assembly information.

[Claim 2]

A training program executed by a computer to cause the computer to implement functions comprising:

an input function for at least a training item or site information;

a function of generating, in accordance with the training item, equipment unit selection information on at least one training equipment unit, generating, in accordance with the site information, base unit selection information which is on a base unit or on the base unit and an extension base unit, and generating assembly information of a training system which includes the training equipment unit and the base unit or includes the training equipment unit, the base unit and the extension base unit; and

a function of presenting any of the equipment unit selection

information, the base unit selection information, or the assembly information.