if the environment is relatively aggressive, which is also unfavourable to operations in a marine environment.

Structures are sometimes strengthened by applying a metal or composite reinforcement to the structure. However, similar problems to those set out above arise if an element is bonded to a substrate. In the case of a metal type reinforcement, it is connected to the structure by means of an adhesive, such as a resin. The composite material usually comprises a resin that acts as an adhesive in particular, and it is difficult to guarantee its satisfactory performance if it is applied in poorly-controlled conditions. The composite material can deteriorate over time if the reinforcement is in an aggressive environment. The same applies to the adhesive if a metal reinforcement is used. The reinforcement imparted to the structure is not therefore durable.

Embodiments of t~~T~~he present invention seek~~aims~~ to overcome some of the limitations of the aforementioned techniques and particularly seek~~aims~~ to provide an adhesive assembly that is reliable and durable, even if the environment is potentially aggressive.

According to a first aspect, there is provided a~~A~~n adhesive assembly ~~is therefore proposed,~~ including:

- a substrate;
- a rigid element arranged with an interval relative to the substrate;
- at least one seal compressed between the substrate and the rigid element and defining a sealed space within said interval; and
- a hardened adhesive occupying said space, the seal being compressed by the rigid element that is held on the substrate by the hardened adhesive, wherein the rigid element and the substrate are configured to compress the seal when a negative pressure is created in said sealed space.

The adhesive contained in the sealed space between the seal, the substrate and the rigid element is advantageously isolated from the environment surrounding the adhesive assembly. The seal makes such isolation possible both during the production of the assembly, so that the implementation conditions and therefore the properties of the adhesive can be controlled, and during the subsequent use of the assembly, which therefore has satisfactory durability. The adhesive can then be chosen depending on the desired properties, with confidence that these properties will be obtained

effectively and durably.

According to a second aspect, there is provided~~the invention proposes~~ a method for assembling a rigid element on a substrate. This method includes the following steps:

/a/ placing a rigid element relative to the substrate, at least one permanent seal being arranged between the rigid element and the substrate in such a way as to define a space in an interval between the rigid element and the substrate;

/b/ bringing the rigid element and the substrate together in such a way as to compress the permanent seal and seal said space, wherein bringing the rigid element and the substrate together comprises establishing negative pressure in said space; and

/c/ hardening an adhesive in the sealed space.

According to a third aspect, there is provided~~In another application of an adhesive assembly according to the invention,~~ a method of reinforcing a structure~~ is proposed~~ including the following steps:

/a/ placing a rigid element opposite a substrate forming part of said structure, at least one permanent seal being arranged between the rigid element and the substrate in such a way as to define a space in an interval between the rigid element and the substrate;

/b/ bringing the rigid element and the substrate together in such a way as to compress the permanent seal and seal said space, wherein bringing the rigid element and the substrate together comprises establishing negative pressure in said space; and

/c/ hardening an adhesive in the sealed space to form a composite reinforcement that is isolated from the outside by the permanent seal, which is kept compressed by the rigid element.

Further characteristics and advantages of the present invention will become apparent from the following description of non-limitative examples of embodiment, with reference to the attached drawings, in which:

- Figure 1 is a diagrammatical view of an embodiment of an adhesive assembly according to the invention;
- Figures 2 to 8 are diagrammatical representations of successive steps of an example method;
- Figure 9 is a diagrammatical view of another embodiment of an adhesive assembly according to the invention.