Figure Captions

Figure 1. Optical fiber reinforcement using tubes.

Figure 2. Optical cable in composite structure.

Figure 3. Preliminary work of an ingress/egress method.

Figure 4. Lay-up of the composite laminate embedding an optical cable with an EFPI.

Figure 5. Application of optical fiber protector for fiber optic ingress/egress.

Figure 6. Several types of optical fiber protector.

Figure 7. Lay-up of the composite laminate before the cure.

Figure 8. Preservation of an optical cable against the curing environment.

Figure 9. Connection using optical connection part fixture.

Figure 10. Schematic diagram of testing setup.

Figure 11. Configuration of an EFPI sensor.

Figure 12. Smart composite structural element.

Figure 13. Signals and strains of EFPI and ESG in the horizontally connected smart composite element.

Figure 14. Signals and strains of EFPI and ESG in the vertically connected smart composite element.
Excess resin flow

(a) Optical fiber reinforced by a rubber tube.

(b) Optical fiber reinforced by a metal and plastic tube.

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(H K Kang, J W Park, C Y Ryu, C S Hong and C G Kim)
(a) Lower part of the protection component.

(b) Assembly of the protection component.

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(a) Lay-up of a composite laminate.

(b) Configuration of caul plates application.

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