

# 신기술 ESP 공법

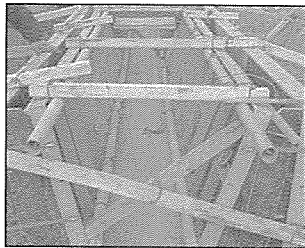
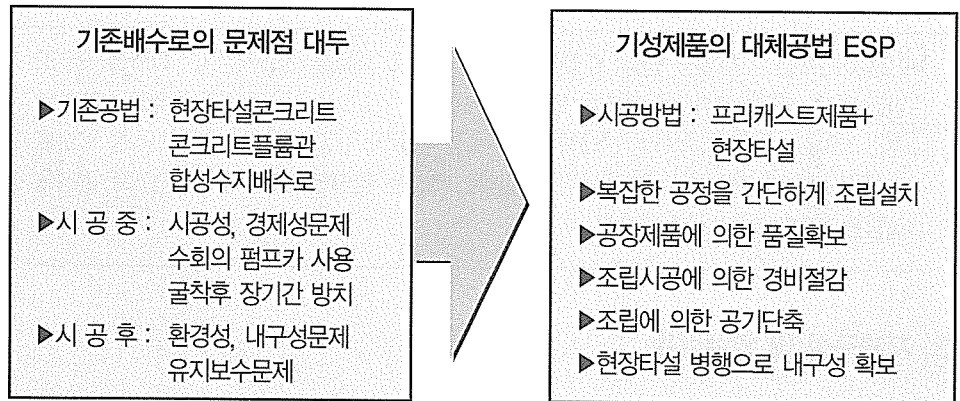
강재(H-형강) 연결부재에 프리캐스트 패널을 조립한 현장타설 콘크리트 배수로 시공법 (ESP : Ecology Steelframe Precast concrete panel)

건설 신기술 제395호

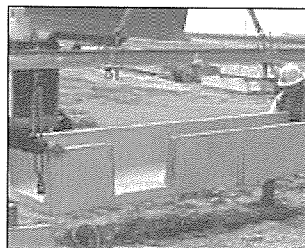
한미기초개발 주식회사

· Tel : 02)597-4530 · 대표이사 : 박수정 (42기)

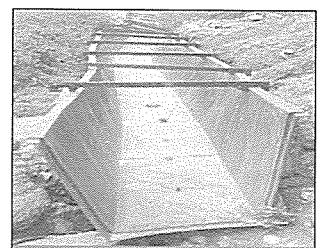
## 1. 신기술개발 배경



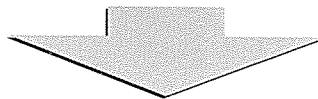
현장타설콘크리트

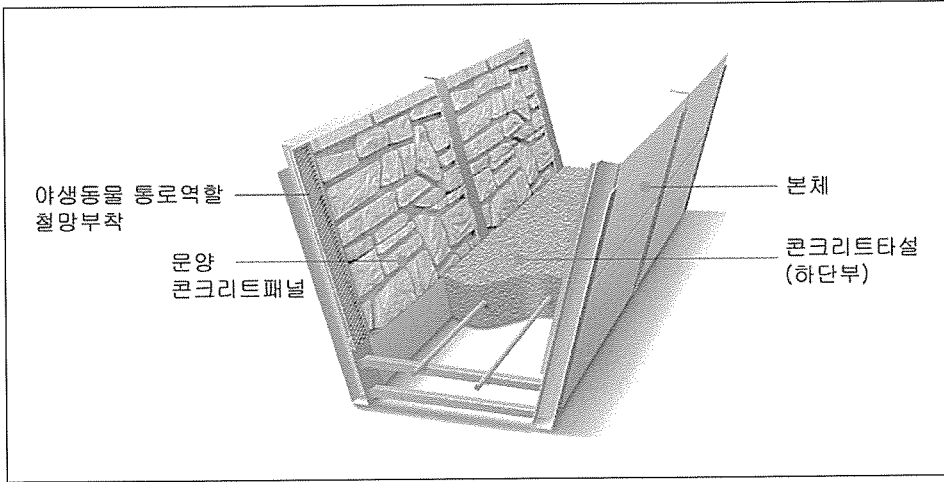


콘크리트플룸관



합성수지



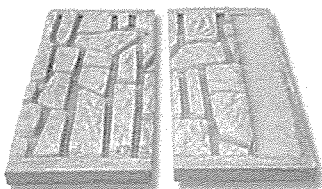


## 2. 신기술 개요

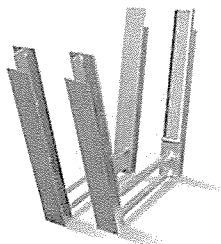
▶ 응용 아연도금된 강재(H-형강) 연결부재에 프리캐스트 패널을 연결시킨 후, 하부철근을 조립한 다음, 바닥콘크리트를 계획된 두께로 타설한 배수로서, 문양패널과 강재연결부에 일정간격으로 철망을 배치하여 생태계 이동통로를 만들어 환경친화성을 갖춘 신기술 배수이며, 시공성과 경제성을 극대화시킨 유일성이 확보된 강재연결부재에 프리캐스트 패널을 조립한 현장타설콘크리트 배수로 임.

## 3. 자재구성 및 연결상세

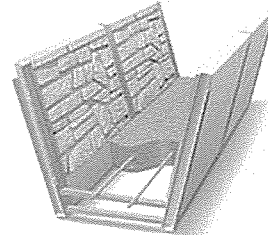
$$\text{자재구성} = \text{콘크리트패널} + \text{강재연결부재} + \text{현장타설 Con'c}$$



▲자연친화적인 문양판



▲연결부재

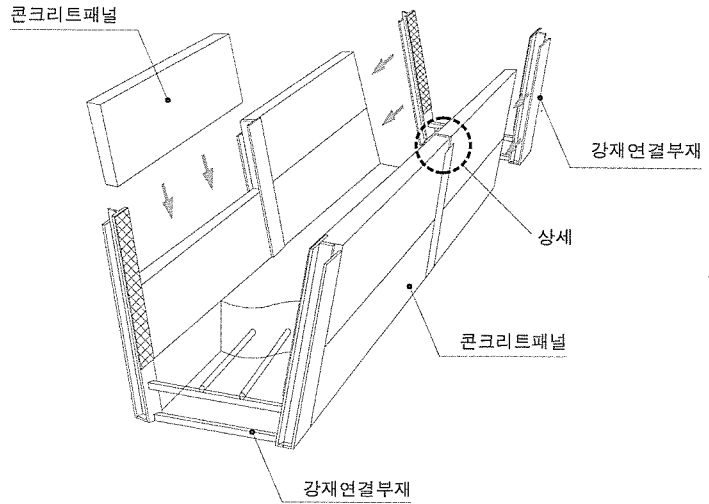


▲제품설치 상태





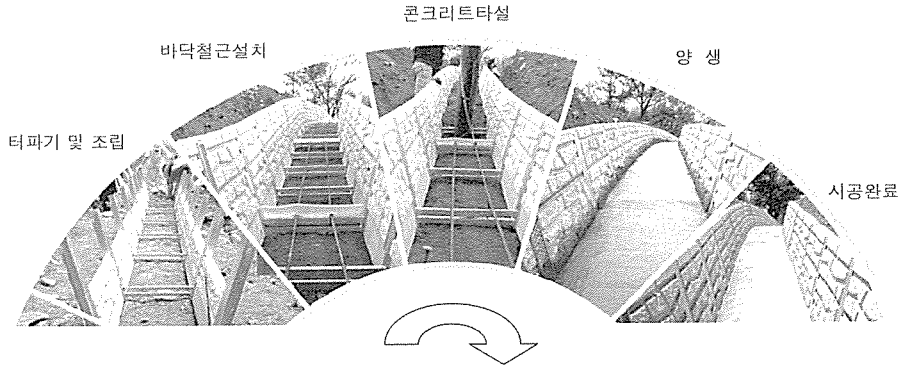
조립  
상세



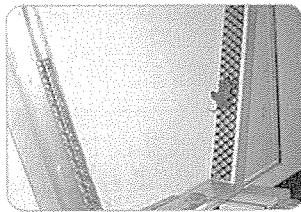
#### 4. 신기술 특징

<b>시공성</b>	<ul style="list-style-type: none"> <li>■ 프리캐스트 조립설치</li> <li>■ 공기단축</li> </ul>	<b>경제성</b>	<ul style="list-style-type: none"> <li>■ 조립에 의한 공기단축</li> <li>■ 공기단축으로 경비절감</li> </ul>
<b>생태계보호</b>	<ul style="list-style-type: none"> <li>■ 문양패널</li> <li>■ 연결부재 철망</li> </ul>	<b>내구성</b>	<ul style="list-style-type: none"> <li>■ 벽체패널 공장생산</li> <li>■ 아연도금 연결부재</li> </ul>
<b>미관</b>	<ul style="list-style-type: none"> <li>■ 자연친화적 다양한 무늬</li> <li>■ 미려한 조형미</li> </ul>	<b>안전성</b>	<ul style="list-style-type: none"> <li>■ 기성패널+강제연결부재</li> <li>■ 토압 및 용기저항</li> </ul>
<b>침하방지</b>	<ul style="list-style-type: none"> <li>■ 바닥부 콘크리트 타설</li> <li>■ 하부 공동발생 억지</li> </ul>	<b>유지보수</b>	<ul style="list-style-type: none"> <li>■ 손상부 부분복구 가능</li> <li>■ 조립에 의한 유지관리성</li> </ul>

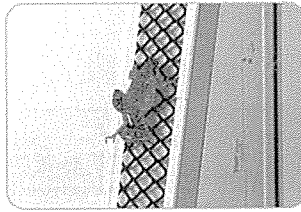
## 5. 시공순서



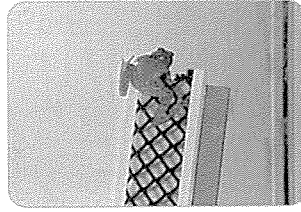
## 6. 생태계보호기능



▲개구리 이동중 I



▲개구리 이동중 II



▲개구리 이동성공

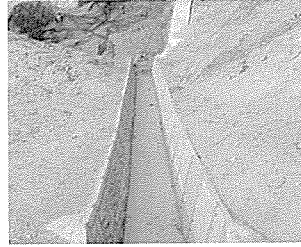
## 7. 적용범위



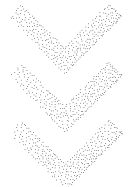
산마루축구



배수로 (U형, V형)



도수로

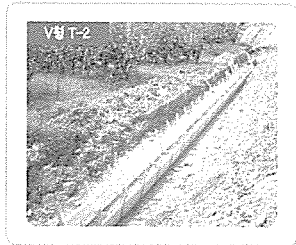




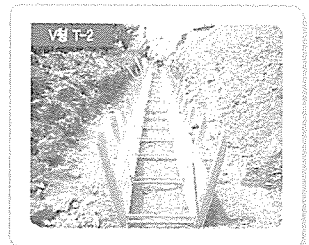
## 8. 시공사진



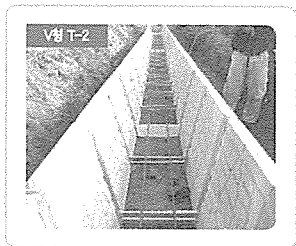
⑦ 되메우기 작업



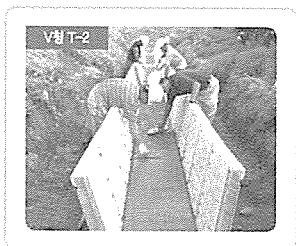
⑧ 시공완료 I



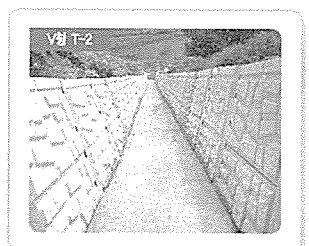
⑨ 시공완료 II



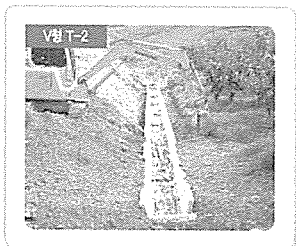
① 자재투입



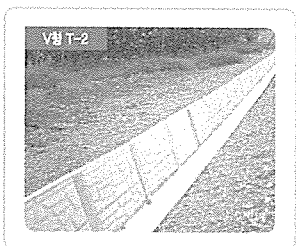
② 조립설치 작업



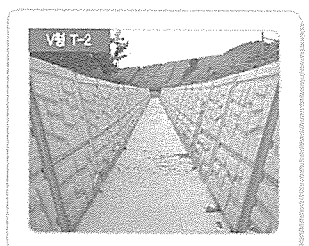
③ 조립설치 작업



④ 조립설치 완료



⑤ 바닥콘크리트 타설작업



⑥ 바닥부위 양생완료