

# 열처리형 고강도 철강재를 이용한 **Tubular Type** 자동차 **Rear CTBA** 개발

2002년 5월 9일

(주) 화신 기술연구소

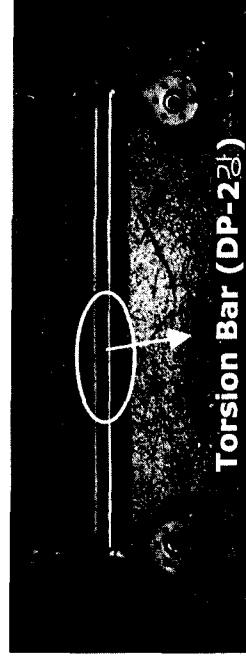
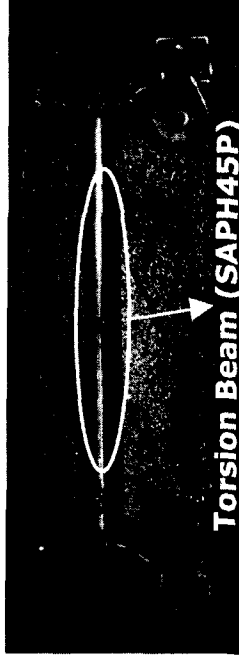
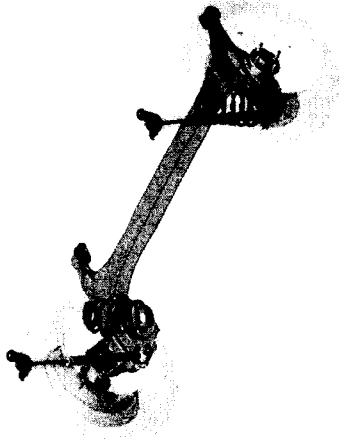
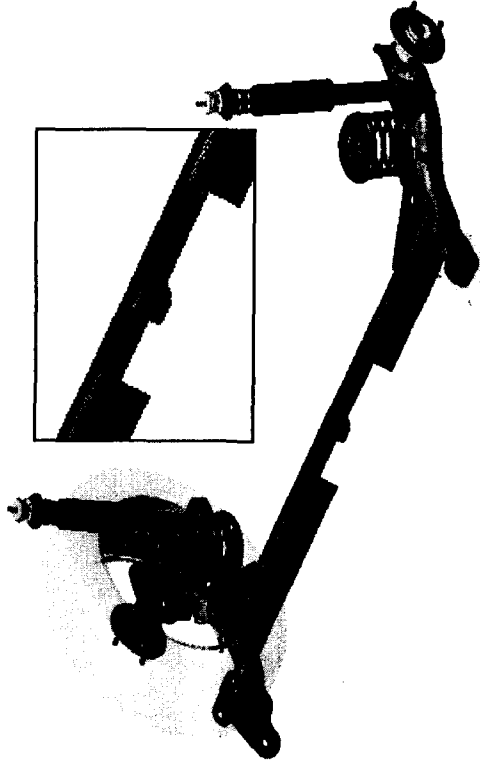
이우식, 문기준, 권태우, 박병철

# Coupled Torsion Beam Axle

Tubular Type Rear CTBA 개발

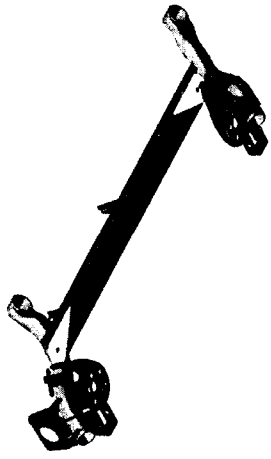
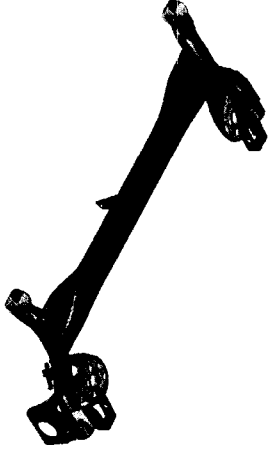
- 기능 : 자동차 후륜부 Wheel 사이 장착
- 차량의 Cornering과 Braking시
- 조정 안정성과 승차감 향상 담당

현재 양산품 형상 : V-Beam Stamping + Torsion Bar 체결



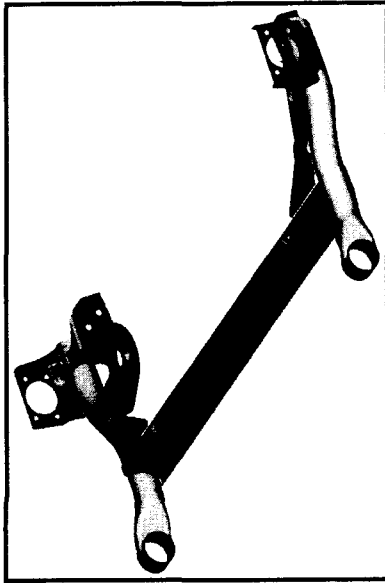
# Comparison of CTBA Type

## Tubular Type Rear CTBA 개발

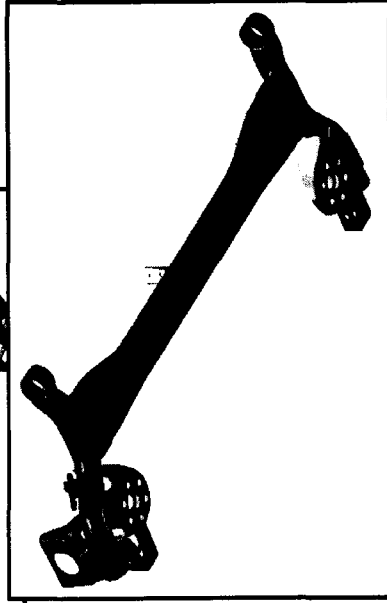
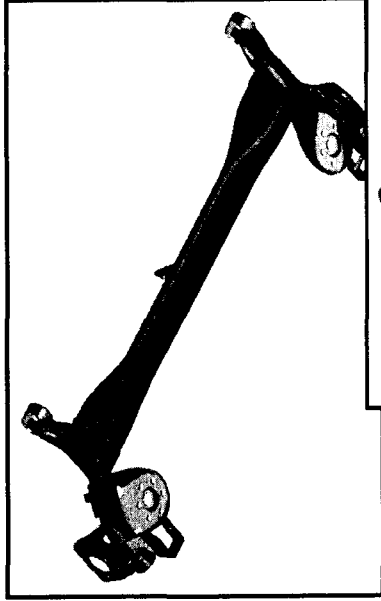
구분	V-Beam Type Torsion Beam	Tubular Type Torsion Beam
형상		
장점	<ul style="list-style-type: none"> <li>- 기존 장비 사용 (초기 투자비 절감)</li> <li>- 기 개발 소재 사용</li> </ul>	<ul style="list-style-type: none"> <li>- 부품수 및 조립 공정수 감소</li> <li>- 용접 길이 감소 (내구력 및 품질 향상)</li> </ul>
단점	<ul style="list-style-type: none"> <li>- 부품수 및 조립 공정수 증가</li> <li>- 용접부 증가, 고도 품질 관리 요구</li> </ul>	<ul style="list-style-type: none"> <li>- 전용 튜브 소재 필요</li> <li>- 고강도 소재 성형 및 열처리 기술 요구</li> </ul>
부품수	24 EA	18 EA
교체 부분	V-beam Torsion Bar Bracket (LH/RH) Beam reinf (LH/RH) Rubber Bushing 부품수 7개	Tubular 부품수 1개

# Design : Tubular CTBA

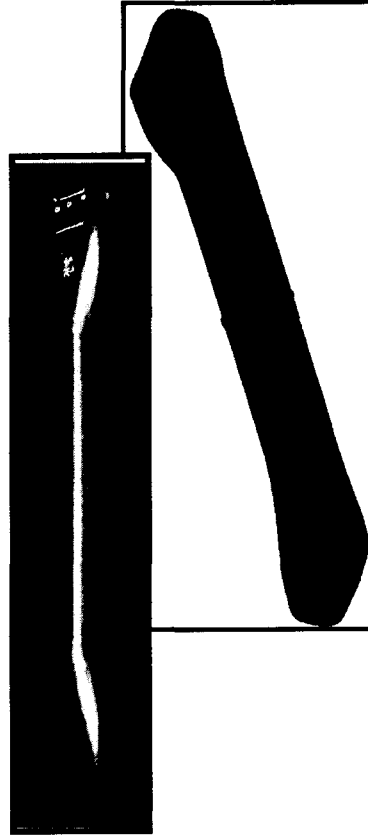
Tubular Type Rear CTBA 개발



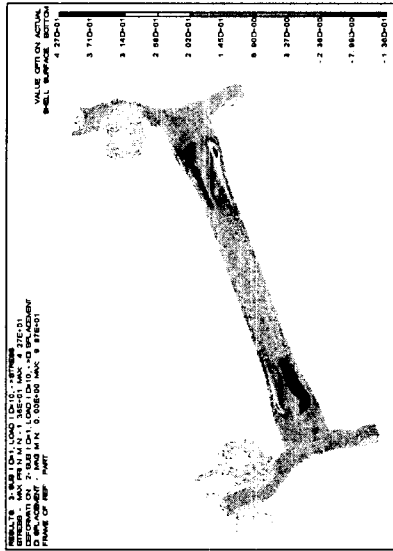
V-Beam Type Torsion Beam



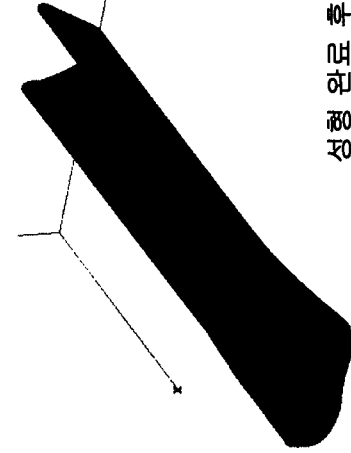
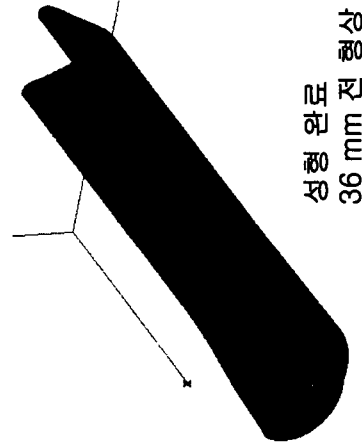
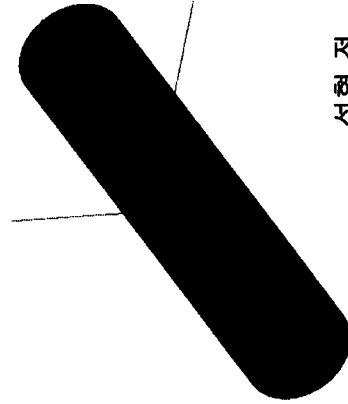
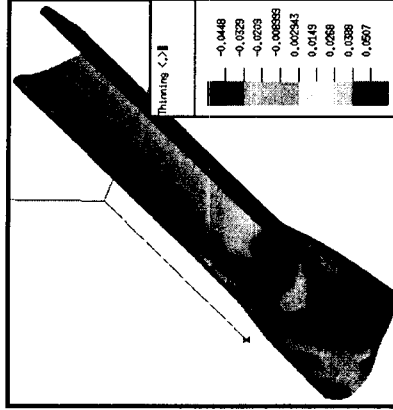
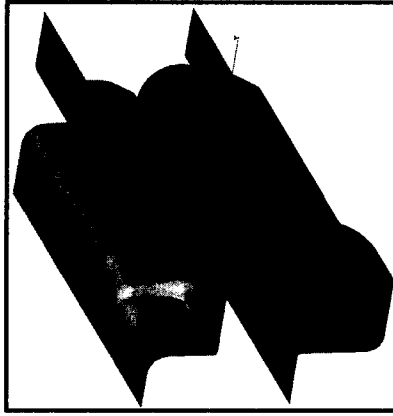
Tubular Torsion Beam Type



## Stress Analysis

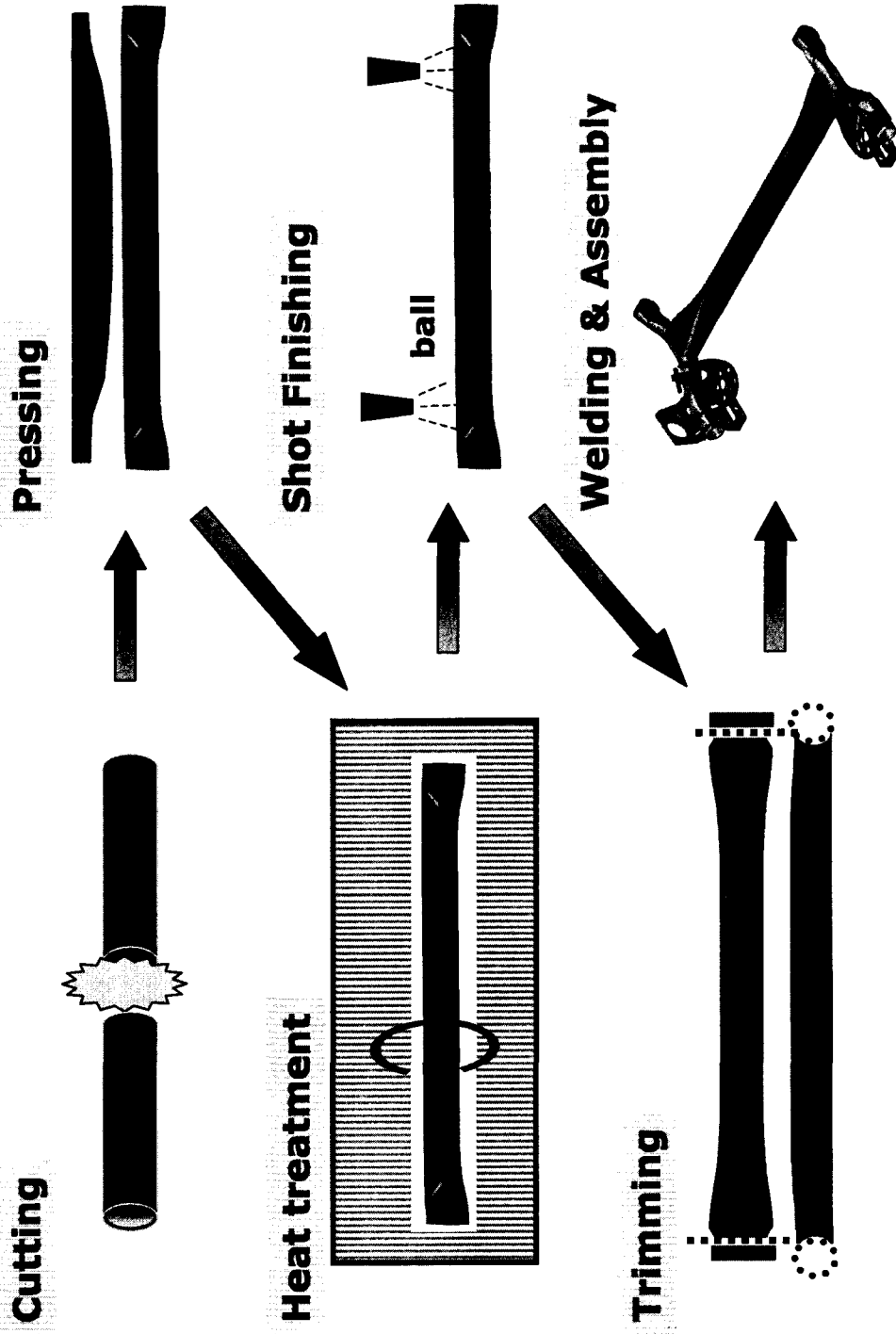


## Formability Analysis



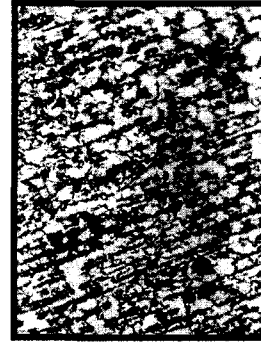
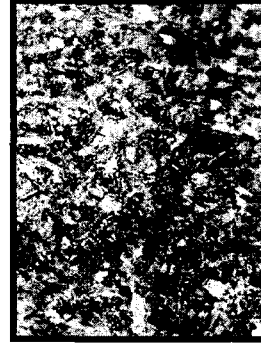
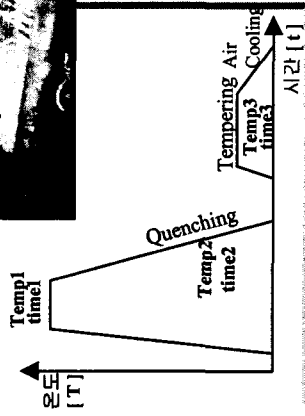
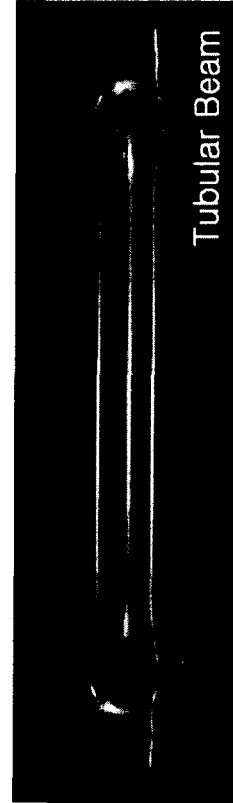
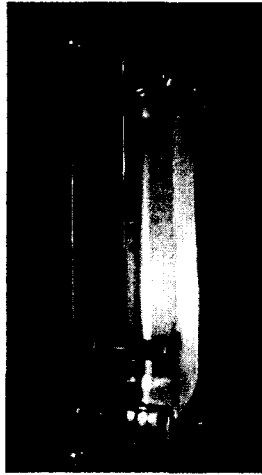
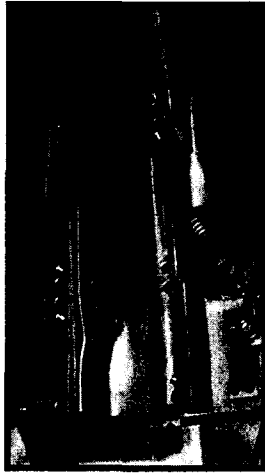
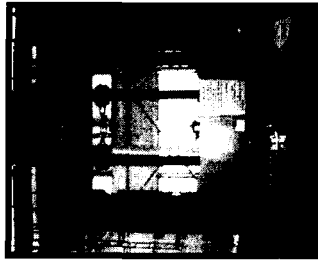
# Process Chart

Tubular Type Rear CTBA 개발



# Try Out & Heat Treatment

## Tubular Type Rear CTBA 개발



# Assembly & Durability Test

Tubular Type Rear CTBA 개발

