



# **REPAIR & REMANUFACTURE BLOWOUT PREVENTER**



**PT. JAYA MANGGALA SAKTI**

## DEFINITIONS

### **Blowout Preventer**

The equipment (or valve) installed at the wellhead to contain wellbore pressure either in the annular space between the casing and the tubular or in an open hole during drilling, completion, testing, or work over operations.

### **Annular Blowout Preventer**

A device that uses an elastomeric packing unit to seal off pressure on a well bore with or without tubular in the bore.

### **RAM Blowout Preventer**

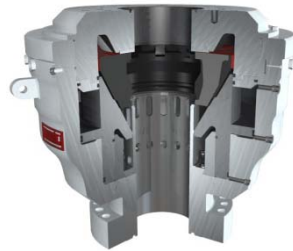
A valve that uses metal blocks with integral elastomeric seals to seal off pressure on a well bore with or without tubular in the bore.

## Manufacturer & Type

### HYDRIL- ANNULAR



GK



GL

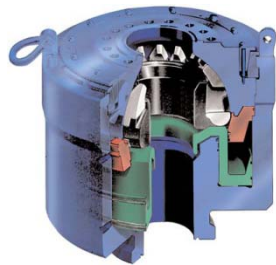


MSP

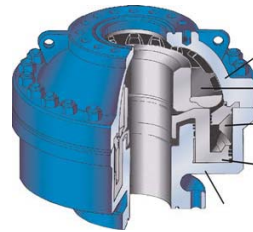


GX

### SHAFFER -SPHERICAL



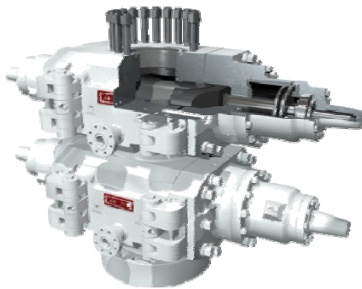
Wedge Cover



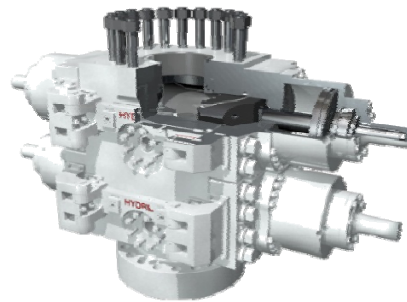
Bolted Cover

## Manufacturer & Type

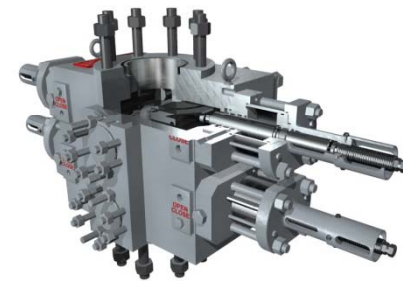
### HYDRIL - RAM



**Work over BOP**

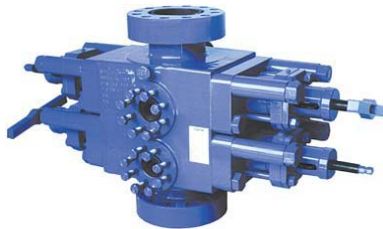


**Conventional**



**Compact**

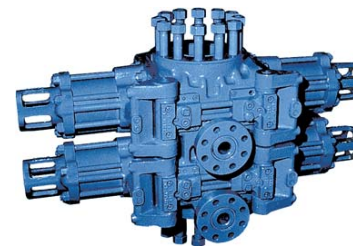
### SHAFFER - RAM



**Chasovoy**



**SL/SLX**



**LWS**



**NXT**

## VISION & MISSION

- **VISION**

TO BE A WELL KNOWN COMPANY WITHIN THE REGION IN PROVIDING TECHNICAL SERVICES AND MAINTENANCE OF DRILLING EQUIPMENT

- **MISSION**

TO INCREASE HUMAN RESOURCES COMPETENCY AND CAPABILITY IN KNOWLEDGE & TECHNOLOGY FOR BETTER CONTRIBUTION IN OIL AND GAS ACTIVITY



**PT. JAYA MANGGALA SAKTI**

## **COMPANY PROFILE**

### **SCOPE OF BUSSINES:**

- REPAIR, REMANUFACTURE, DRILLING EQUIP. IAW API 16A & 6A  
BLOW OUT PREVENTER,  
DRILLING SPOOLS,  
FLUID ENDS,  
VALVES, ETC.

### **MANAGEMENT COMMITMENT**

- COMMITTED TO INCREASE COMPANY RESOURCES IN TERMS OF COMPETENCY AND CAPABILITY FOR SAFELY PRODUCING HIGH QUALITY SERVICE AND PRODUCTS
- COMMITTED TO CONTINUALLY ADOPT OF TECHNOLOGY ADVANTAGES FOR BUSSINES ENHANCEMENT



**PT. JAYA MANGGALA SAKTI**

## **PROBLEMS IN USE OF BOP**

**❑ AVAILABILITY OF SPARE PARTS & SOFT GOODS:**

- SEALS/RUBBER PACKING**

**❑ LEAKING / UNPROPER WORKING - MAY RESULT FROM**

- DAMAGED SEALS / PACKING**
- DAMAGED METAL SEALING SURFACE**  
**CORROSION, WORN ; SCRATCHES, DENTS**

**❑ CRACKS – DUE TO**

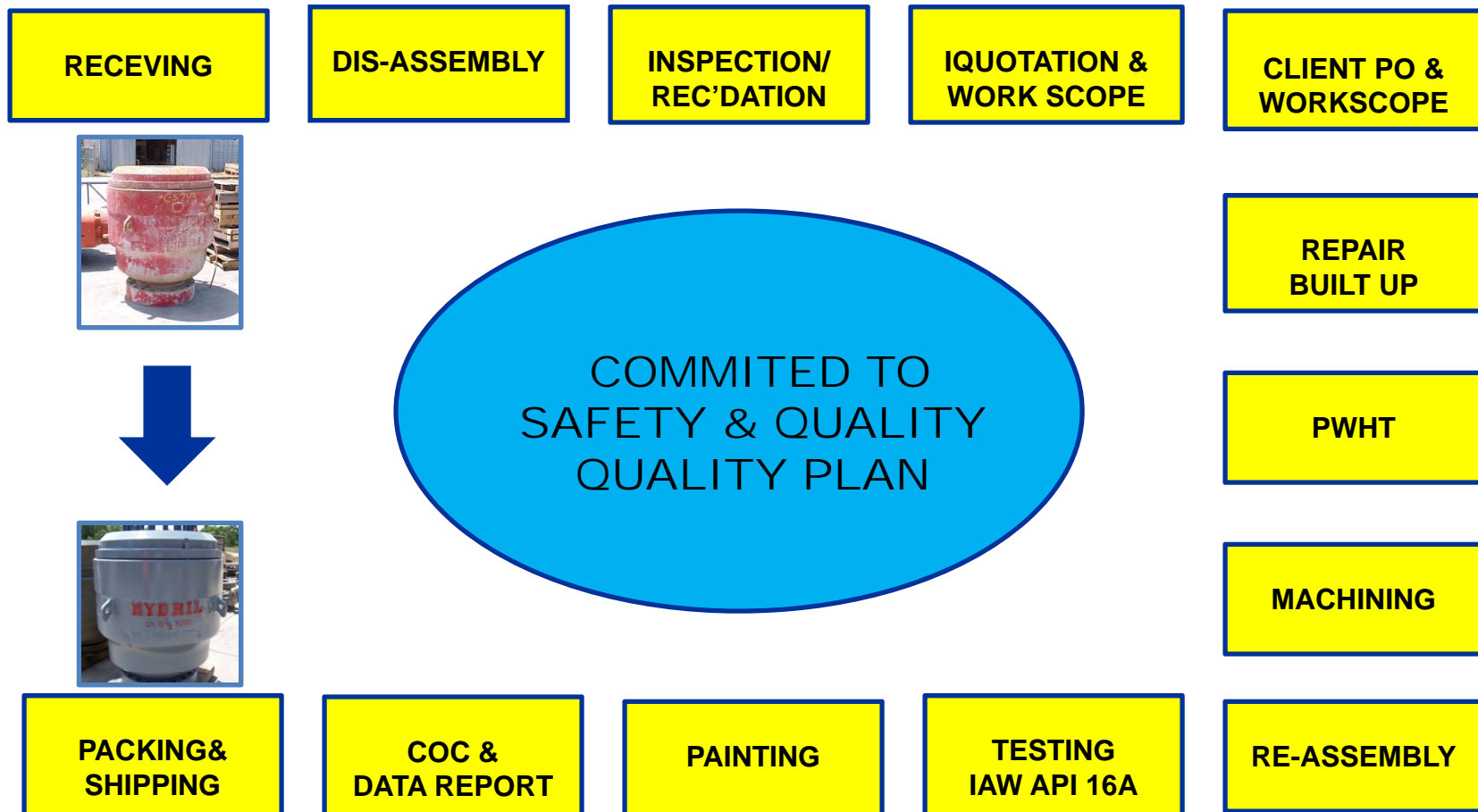
- HIGH STRESS EXISTING**
- H<sub>2</sub>S ATTACKING -UNPROPER METAL HARDNESS**
- UNCONTROLLED WELDING**
- UNPROPER/UNCONTROLLED PWHT**

## JMS SERVICES

- ☐ TO TIMELY PROVIDE PARTS / SOFT GOODS  
- FOREIGN VENDOR AGENT
- ☐ TO PROVIDE SERVICES IN INSPECTION & TESTING IN TERMS OF  
MAINTENANCE AFTER / PRIOR TO USE
- ☐ TO DO WORKSHOP REPAIR, REMANUFACTURE AND TEST
- ☐ TO PERFORM MIGAS CERTIFICATION/RECERTIFICATION



## REPAIR/REMANUFACTURE PROCESS



## WHAT IS QUALITY PLAN ?

- THE WAY TO ACHIEVE AGIVEN QUALITY / CRITERIA STATED IN STANDARD / SPECIFICATION.
- PLANNED ACTIVITIES, PROCEDURES USED, CRITERIA VERIFICATION AND RECORDS REQUIRED FOR A CERTAIN ACTIVITY

## RECEIVING INSPECTION

- TAKE PHOTOS
- RECORD IDENTIFICATION OF THE UNIT
- RECORD TYPE OF THE UNIT- MAKER,CLASS,SIZE
- RECORD ACCESSORIES OF THE UNIT
- GENERAL VISUAL APPEARANCE OF THE UNIT
- ALLOCATE JOB NUMBER FOR THE UNIT

## DIS-ASSEMBLY

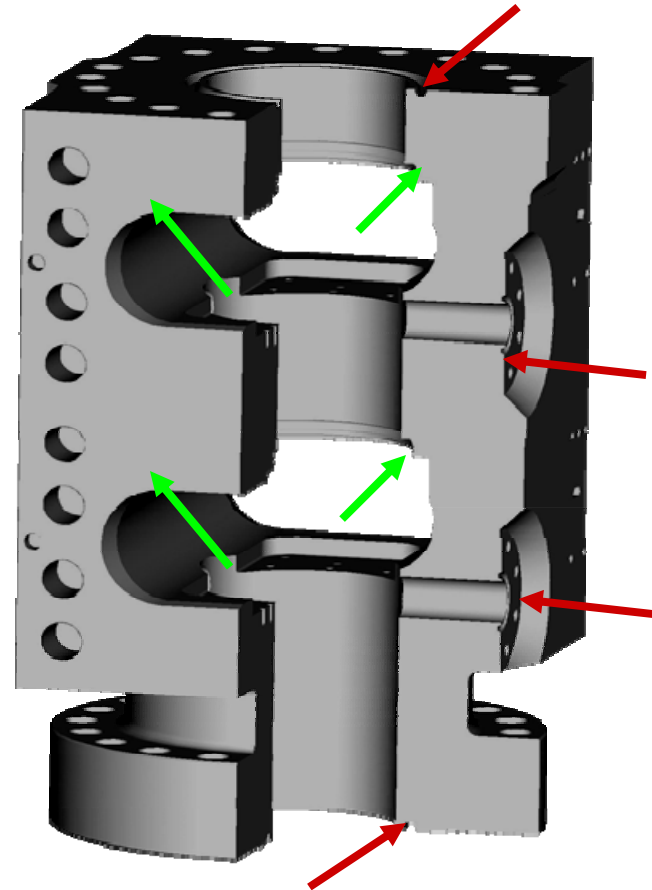
- MANUAL EQUIPMENT
- WATER BASED LUBE OIL FOR SEALS

## INSPECTION & RECOMMENDATION

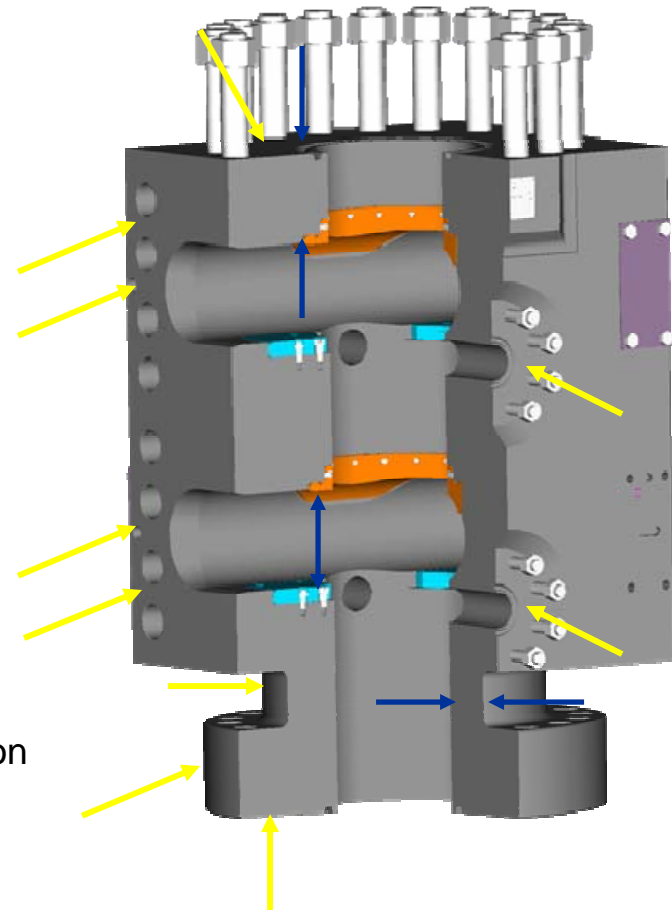
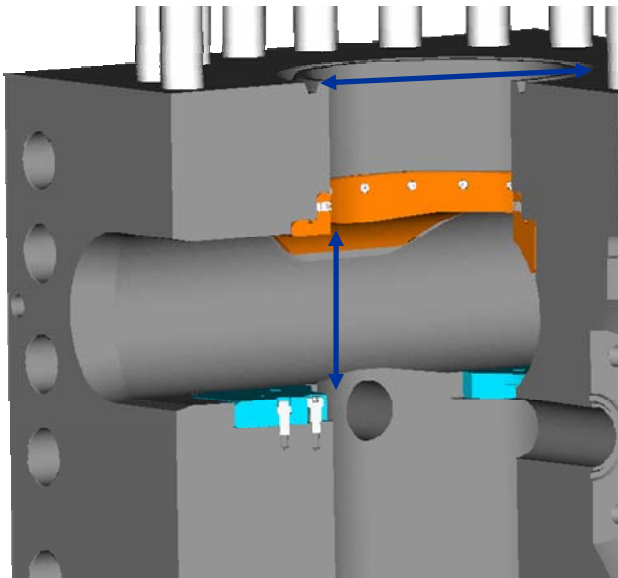
VISUAL - sealing surface

Green – Inconel

Red – CRA ( SS 309 )



## INSPECTION & RECOMMENDATION



Yellow arrow - hardness location

Blue – critical dimensions

## QUOTATION & WORK SCOPE

- QUOTATION & WORK SCOPE BASED ON RECCOMENDATION AS A RESULT OF INSPECTION
- CLIENT MAY CHANGE WORK SCOPE

## BUILD UP PROCESS

### WELDING

- PMI
- USING APPROPRIATE WPS
- RECORD AND MAINTAIN WELDING PARAMETERS
- VISUAL/NDT AND HARDNESS TEST

### METAL COATING

- THERE SOME METHODS USED FOR SURFACE BUILD UP
- SERVICE CONDITION IS BASIC CONSIDERATION FOR SELECTION



**PWHT**  
**( POST WELD HEAT TREATMENT )**

**CRITICAL PHASE - ATTENTION SHOULD BE GIVEN TO**

- HEATING RATE
- SOAKING TEMPERATURE
- COOLING RATE TO TEMP +/- 750 F

**HARDNESS CHECK**

- HARDNESS WILL CONFIRM THE ACCEPTABILITY OF PWHT
- HARDNESS NOT MORE THAN 22 HRC FOR SOUR SERVICE

## RE-ASSEMBLY

- CHECK ALL PARTS FOR CORRECTNESS & COMPLETENESS
- USE MANUAL BOOK AS REFERENCE
- SOFT GOODS ARE LUBRICATED WITH WATER BASED LUBE OIL

## PRESSURE TESTING

- IAW API 16A
- TESTING UNIT

TEST GAUGES & PRESSURE RECORDER CALIBRATED

- SHELL TEST

REPAIR CASE                      ➡ T.P : 1 TIMES RATING PRESSURE

REMANUFACTURE CASE ➡ T.P : 1.5 TIMES RATING PRESSURE

- HYD.OPERATOR TEST

T.P: 1 TIMES OPERATOR RATING PRESSURE

- WELL BORE TEST

LOW T.P : 200-300 PSI

HIGH T.P : EQUAL TO EQUIP. RATING PRESSURE.

## PAINTING

- TO FOLLOW CLIENT SPECIFICATION
- ORIGINAL OEM PAINT SPECIFICATION

## REPORT DATA PACKAGE

- DETAIL OF WORKSCOPE
- COMPANY CERTIFICATE
- INSPECTION AND RECOMMENDATION
  - VISUAL/NDT /HARDNES /DIMENSIONAL REPORT
  - RECOMMENDATION
- IN PROCESS RECORDS
  - PMI /WELDING /NDT/HARDNESS REPORT
  - PWHT CHART
- FINAL TEST REPORT
  - PRESSURE CHART
  - TEST RECORDS
- CERTIFICATE OF CONFORMANCE
- PERSONNEL & EQUIPMENT CERTIFICATES

## PRESERVATION & SHIPPING

- CHECK THE TRUE OF BOPs DATA
- ALL MACHINED SURFACES MUST BE PROTECTED
- STRING BORE AND OUT LETS MUST BE COVERED/PROTECTED
- CLIENT SHIPPING INSTRUCTION SHALL BE FOLLOWED

## MIGAS CERTIFICATION

- APPROVED TEST PROCEDURE
- WITNESS SHELL, FUNCTION, WELLBORE TESTS
- APPROVED TEST RECORD & TEST CHART
- CERTIFICATE OF CONFORMANCE



**PT. JAYA MANGGALA SAKTI**

### JMS RESOURCES

- **FACILITY AND EQUIPMENT**
  - WORKSHOP BAY
  - LATHE ,VTL, HB MACHINE, ETC.
  - STRESS RELIEF FURNACE
  - INSPECTION TOOLS & EQUIPMENT
  - TESTING EQUIPMENT
  - WELDING EQUIPMENT
  - HARD CHROME PLATING
  - OHC - 15 TON
- **SYSTEM AND ADMINISTRATION**
  - QUALITY/HSE MANUALS
  - PROSEDURES / WORK INSTRUCTIONS /RECORDING FORMS
- **PERSONNEL COMPETENCY**
  - COMPETENT & HAVING MORE THAN 10 YEARS EXPERIENCE INREPAIRING & REMANUFACTURING OF DRILLING EQUIPMENT.



### FACILITY AND EQUIPMENT



VTL MACHINE



HB MACHINE



LATHE MACH.



WELD.MACH.



FURNACE & TEMP. RECORDER



TORQUING EQUIP.

### INSPECTION TOOLS & TEST EQUIPMENT



OD Micrometers



Hardness Tester  
MPI Equip.



Pressure Testing Unit

### MANUAL & PROCEDURES QUALITY & HSE

#### MANUALS

- API SPEC. Q1- FOR QUALITY
- BP MIGAS REQ. - FOR HSE

#### PROCEDURES

#### WORK INSTRUCTIONS

#### FORMS

### TECHNICAL KEY PERSONELS

AGUS ISMAIL

*MORE THAN 15 YEARS EXPERIENCE IN WELDING  
/ REPAIR & INSPECTION OF BOPs, VALVEs,*

DONATUS BASKORO

*MORE THAN 15 YEARS EXPERIENCE IN WELDING / REPAIR &  
INSPECTION OF BOPs, VALVEs*

MASRI

*MORE THAN 12 YEARS EXPERIENCE IN DISASSEMBLY/ ASSEMBLY  
AND TEST OF BOPs & VALVEs*

AGUS RIFANI

*MORE THAN 12 YEARS EXPERIENCE IN MAINTENANCE AND  
TESTING OF VALVEs & BOPs*

## SKT MIGAS

REPUBLIK INDONESIA  
DEPARTEMEN ENERGI DAN SUMBER DAYA MINERAL  
DIREKTORAT JENDERAL MINYAK DAN GAS BUMI

**SURAT KETERANGAN TERDAFTAR**  
No. 615 /SKT/DU 6-TB/DMT/2007

Mempertahankan surat permohonan pendaftaran perusahaan jasa penunjang nasional No. L-012/SG/I/07 tanggal 1 Februari 2007 dan berdasarkan :

1. Surat Direktur Jenderal Minyak dan Gas Bumi No. 111/DJ/MIGAS/1974 tanggal 13 April 1974 jo. No. 7523/29 06/DJM 6/2003 tanggal 31 Desember 2003 perihal Surat Keterangan Terdaftar (SKT)
2. Hasil verifikasi yang dilaksanakan oleh Sub Direktorat Usaha Penunjang Migas.

**DIREKTUR JENDERAL MINYAK DAN GAS BUMI**

dengan ini memberikan Surat Keterangan Terdaftar kepada

Nama Perusahaan : **PT. SUGICO GRAHA**  
Alamat : Jl. Imam Bonjol No. 58 - 70, Menteng  
Jakarta - 10310

sebagai perusahaan jasa penunjang pada kegiatan usaha minyak dan gas bumi dengan bidang usaha :

A : Jasa Pabrikasi ( Komponen Valve )  
B : Jasa Konstruksi ( Mekanikal, Elektrikal, Repair dan Remanufacturing BOP, Christmas Tree, Whellhead & Valve )  
D : Jasa Konsultan ( Penyedia Drilling & Production Waste Management Service dan Kimia Khusus )

Dengan ketentuan sebagai berikut :

1. Dalam melaksanakan kegiatan usahanya, perusahaan wajib mengikuti ketentuan peraturan perundang-undangan yang berlaku.
2. Semaksimal mungkin menggunakan barang dan jasa produksi dalam negeri
3. Menyampaikan laporan kegiatan usaha perusahaan setiap 6 (enam) bulan sekali kepada Direktorat Teknik dan Lingkungan Migas
4. Direktorat Teknik dan Lingkungan Migas akan melakukan pengawasan atas pelaksanaan kegiatan usaha perusahaan
5. Surat Keterangan Terdaftar ini berlaku sampai dengan 11 Agustus 2008 dan dapat diperpanjang lagi.

Dikeluarkan di Jakarta  
Pada tanggal 6 November 2007

**Direktur Jenderal Minyak Dan Gas Bumi**  
**Direktur Teknik dan Lingkungan Migas**

Ir. Suyartono, M.Sc  
NIP. 100002710

TOTR



**PT. JAYA MANGGALA SAKTI**

