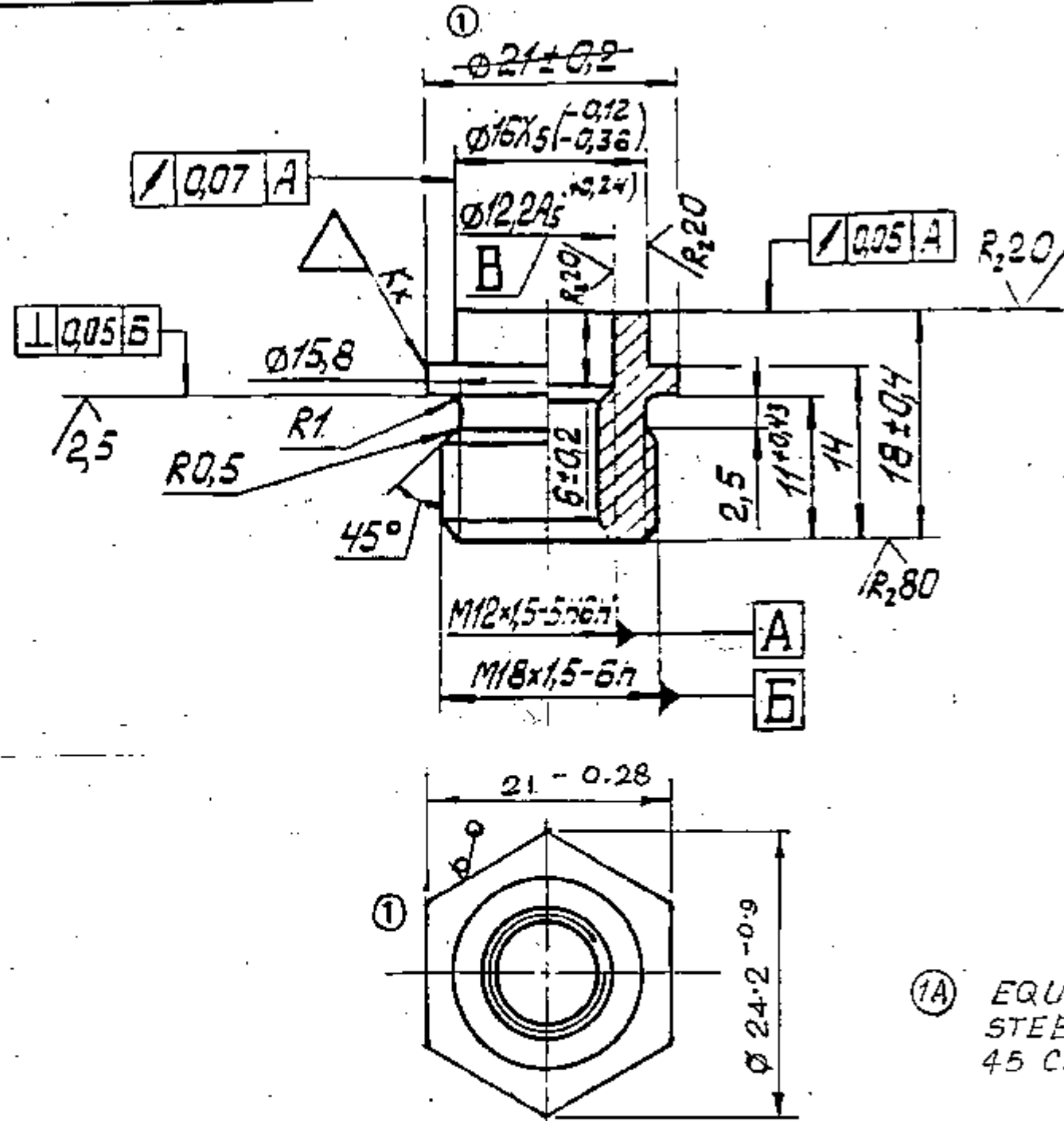


DRAWING NUMBER
20-29-36



1. Alt. Matl. IS STEEL 40, 50, GOST 1050-74.
2. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS:
FOR HOLES - AS PER A₇, SHAFTS - AS PER B₇, OTHERS - AS PER CM₇
3. THREAD TRACE ON SURFACE B IS PERMITTED.
4. COATING: CADMIUM-PLATED 9 MICRONS THICK, OILED
ABSENCE OF THE COATING ON THE INTERNAL SURFACE IS ALLOWED.

①A EQUIVALENT MATERIAL
STEEL 080 M40 (EN8) TO BS:970 OR
45 CB TO IS:1570

PLOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

EST. WT. 0.18 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS #1 LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

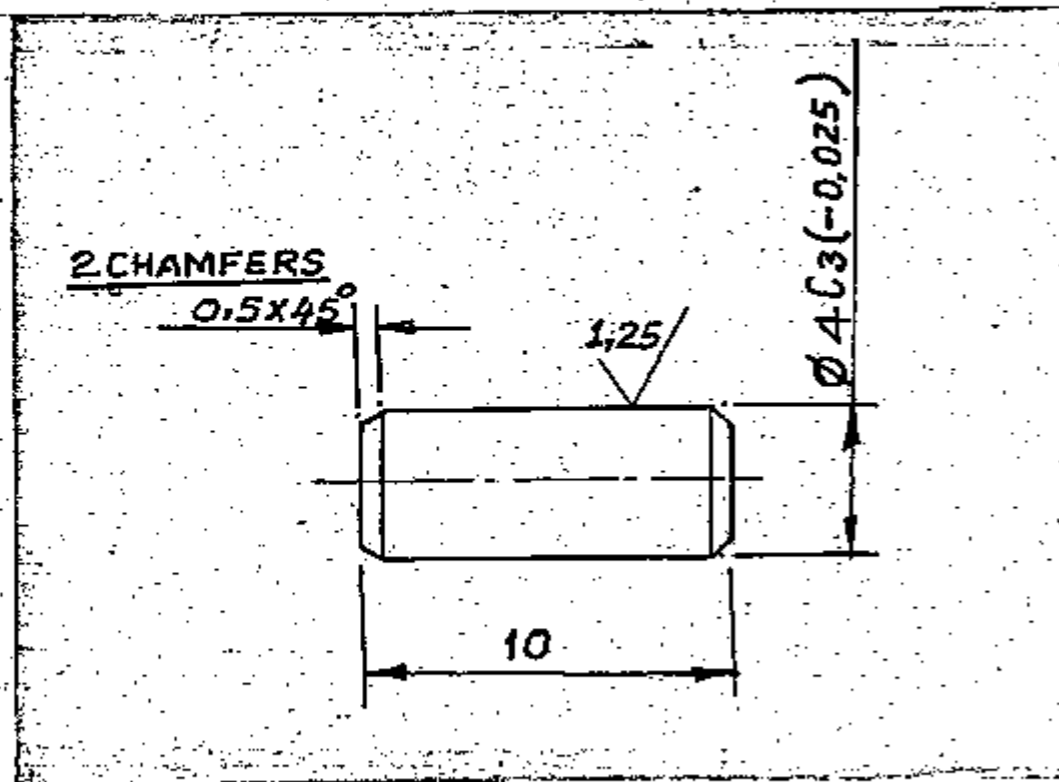
| | | | |
|---------------------------|----------|------------------------------------------------------------|----------------|
| DRN | AS | MATERIAL: ① hex bar | USED ON |
| CHD | Chandhan | 21-5 GOST 8560.78 | CS 20-27-01-4 |
| TCD | AS | 45-5 GOST 1051.73 | CS 20-29-08-8 |
| APPD | C.S. Rao | CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI. | |
| DATE | 28-2-01. | SCALE:- 2 : 1 | |
| DIMENSIONS IN mm | | TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102-69. | |
| ALL THREADS TO CONFORM TO | | D S CAT NUMBER | DRAWING NUMBER |
| ISSUE | DATE | 20-29-36 | |
| 1 A | 10-7-10 | 4 1/2 ALT.COMM. Mtg. MINUTES | |
| 1 | 16.2.01 | POINT No 7 DT. 26-10-09 | |
| | | EFA/P/PDO/023 dt 22.9.2000 | |

SIZE A3



DRAWING NUMBER
20-52-01

Rz40
√(√)



EXPLANATORY NOTE:

MATERIAL QUOTED: 45 GOST 1050-74

45 = GRADE OF STEEL

CHEMICAL COMPOSITION %:

CARBON = 0.42 - 0.50

SILICON = 0.17 - 0.37

MANGANESE = 0.50 - 0.80

CHROMIUM = 0.25

PHOSPHORUS = 0.035

SULPHUR = 0.040 } MAXIMUM

COPPER = 0.25

NICKEL = 0.25

MECHANICAL PROPERTIES:

ULTIMATE TENSILE STRENGTH $\text{Kgf/mm}^2 = 61$ (Min)

YIELD POINT $\text{Kgf/mm}^2 = 36$ (Min)

ELONGATION $\% = 16$ (Min)

IMPACT STRENGTH $\text{Kgf.m/cm}^2 = 5$ (Min)

1. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS FOR SHAFTS ARE AS PER B7.
2. COATING: CHEMICALLY OXIDIZED, OILED.

Ⓐ EQUIVALENT MATERIAL
STEEL 080 M40 (EN8) TO BS: 970 OR
45 CB TO IS: 1570

EXPLANATORY NOTE ADDED ON 20-6-92

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

EST. WT. 0.001 kg. TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

| | | | |
|---------------------------------------------------------|--------------|-----------------------------------------------------------|----------------------------|
| DRN | | MATERIAL:- | USED ON |
| CHD | <i>Red 8</i> | 45 GOST 1050-74 | C620-27-01- <i>7</i> |
| TCD | <i>Am</i> | | |
| APPD | <i>ST</i> | | |
| DATE | 5-4-87 | CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADL | |
| SCALE:- | 5:1 | | |
| DIMENSIONS IN mm | | TITLE | |
| TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69. | | ROUND LOCK PIN 4x10 | |
| ISSUE | DATE | NATURE OF AMENDMENTS | D S CAT NUMBER |
| A | 10-7-10 | 4th ALT. COMM. Mth. MINUTES POINT No. 7 DT 26-10-09 | DRAWING NUMBER 20-52-01 |



SIZE A3



DRAWING NUMBER
327-21

Rz20 ✓✓

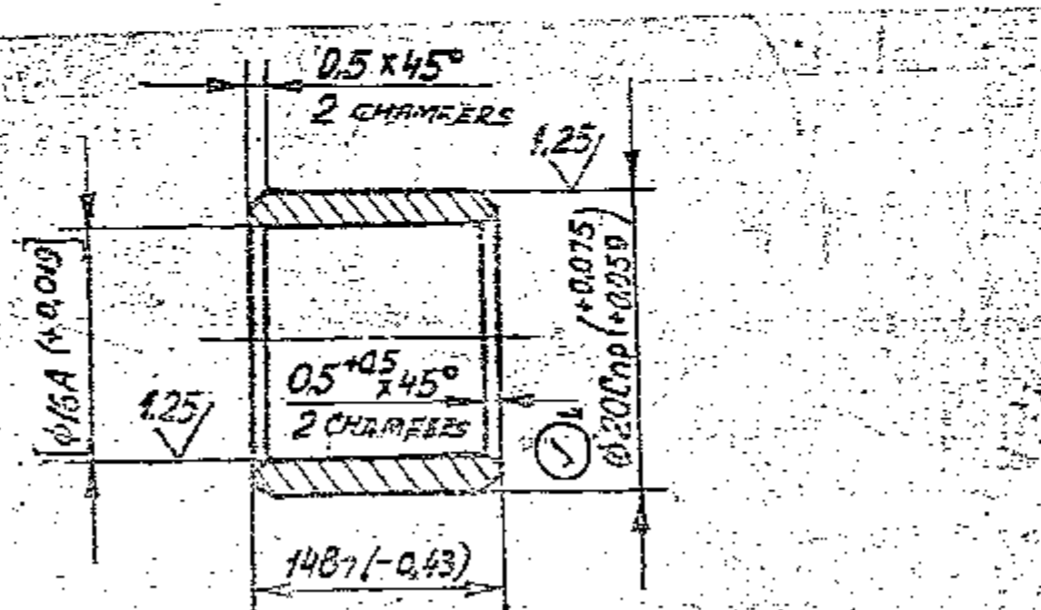
EXPLANATORY NOTE :

3. MATERIAL QUOTED : BRASS A63 GOST 15527-70.

ALTERNATE MATERIAL QUOTED : BRASS AC59-1 GOST 15527-70

CHEMICAL COMPOSITION :

| BASIC ELEMENTS | GRADE A63 | GRADE AC59-1 |
|-------------------|---------------|--------------|
| COPPER | = 62.0 - 65.0 | 57.0 - 60.0 |
| LEAD | = - | 0.8 - 1.9 |
| <u>ADMIX</u> ZINC | REMAINDER | REMAINDER |
| LEAD | = 0.07 (max) | - |
| IRON | = 0.2 (max) | 0.5 (max) |
| ANTIMONY | = 0.005 (max) | 0.010 (max) |
| BISMUTH | = 0.002 (max) | 0.003 (max) |
| PHOSPHORUS | = 0.01 (max) | 0.02 (max) |
| TOTAL | = 0.5 (max) | 0.75 (max) |



- CARRY OUT FINAL MACHINING AS PER THE DIMENSION GIVEN IN SQUARE BRACKETS IN ASSY 20-27-01-4.
- ALTERNATE MATERIAL IS BRASS A C59-1, GOST 15527-70.
- REPAIR SIZE DIMENSIONS ADDED BASED ON LT.No. 82B47/OH/QAS/ED DT. 27 MAR 95 AS FOLLOWS:
REPAIR SIZE DIMENSIONS ADDED WHERE INDICATED THUS ⊕

| Sl.No. | R1 | R2 | REMARKS |
|--------|----------------------------------|----------------------------------|----------------------------------------------------------------|
| ⊕ 1 | $\phi 20.15$ +0.075 +0.059 | $\phi 20.30$ +0.075 +0.059 | 1. ALL OTHER CONDITIONS AS PER STD.DRG 2. MARK REPAIR SIZE. |

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

EST. WT. 0.013 Kg TO BE STAMPED OR MARKED WHERE INDICATED THUS ⊕ (LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

| | | | | | | | | |
|-----------------------------------------------------------|-----|-----|------|-------------------------------------|-------|------------------|--------------------------------------------------------|---------------------------|
| DRN | CHD | TCD | APPO | DATE | SCALE | DIMENSIONS IN mm | TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69 | ALL THREADS TO CONFORM TO |
| | | | | 04-05-87 | 2 : 1 | | | |
| MATERIAL:- A63 GOST 15527-70 | | | | USED ON CS 3327-01-10 CS 20-27-01-4 | | | | |
| CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI | | | | | | | | |
| TITLE | | | | | | | BUSH | |
| D S CAT NUMBER | | | | DRAWING NUMBER | | | | |
| | | | | 327-21 | | | | |

ISSUE DATE NATURE OF AMENDMENTS

KVD No- 66751



SIZE A3



DRAWING NUMBER

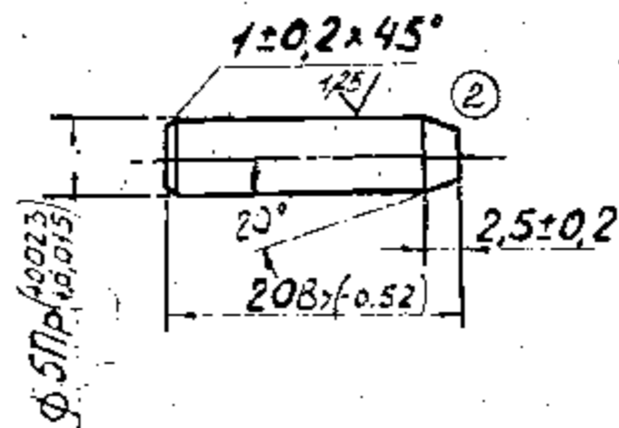
352-47

Rz 40 (✓)

1. CONTROL GROUP IV TO TT 11.
2. DULL THE SHARP EDGES.
3. COATING: ~~XUM-OKC~~. CHEMICAL OXIDIZING, OIL FINISHING.
4. HARDNESS: HRC 28 - 33.

SCALE: 1:1

M 1:1



I

1. Группа контроля IV по ТТ 11
2. Острые кромки затупить.
3. Покрытие: Хум. Окс
4. Твердость HRC 28 - 33.

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION

EST. WT.
0.0033 kg.

TO BE STAMPED OR MARKED WHERE INDICATED THIS # 1 LETTERS)

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

DRM

CND

TCD

APPO

DATE

SCALE:- 2:1

DIMENSIONS IN mm

TOLERANCE ON DIMNS

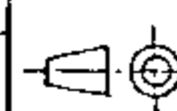
UNLESS OTHERWISE STATED IS: 2102-69

ALL THREADS TO CONFORM TO

MATERIAL:-
STEEL 38XA GOST 4543-71

USED ON
CB 20-27-01-4

CONTROL RATE OF QUALITY ASSURANCE (HEAVY VEHICLES)
AVAD



TITLE
CYLINDRICAL PIN

D S CAT NUMBER

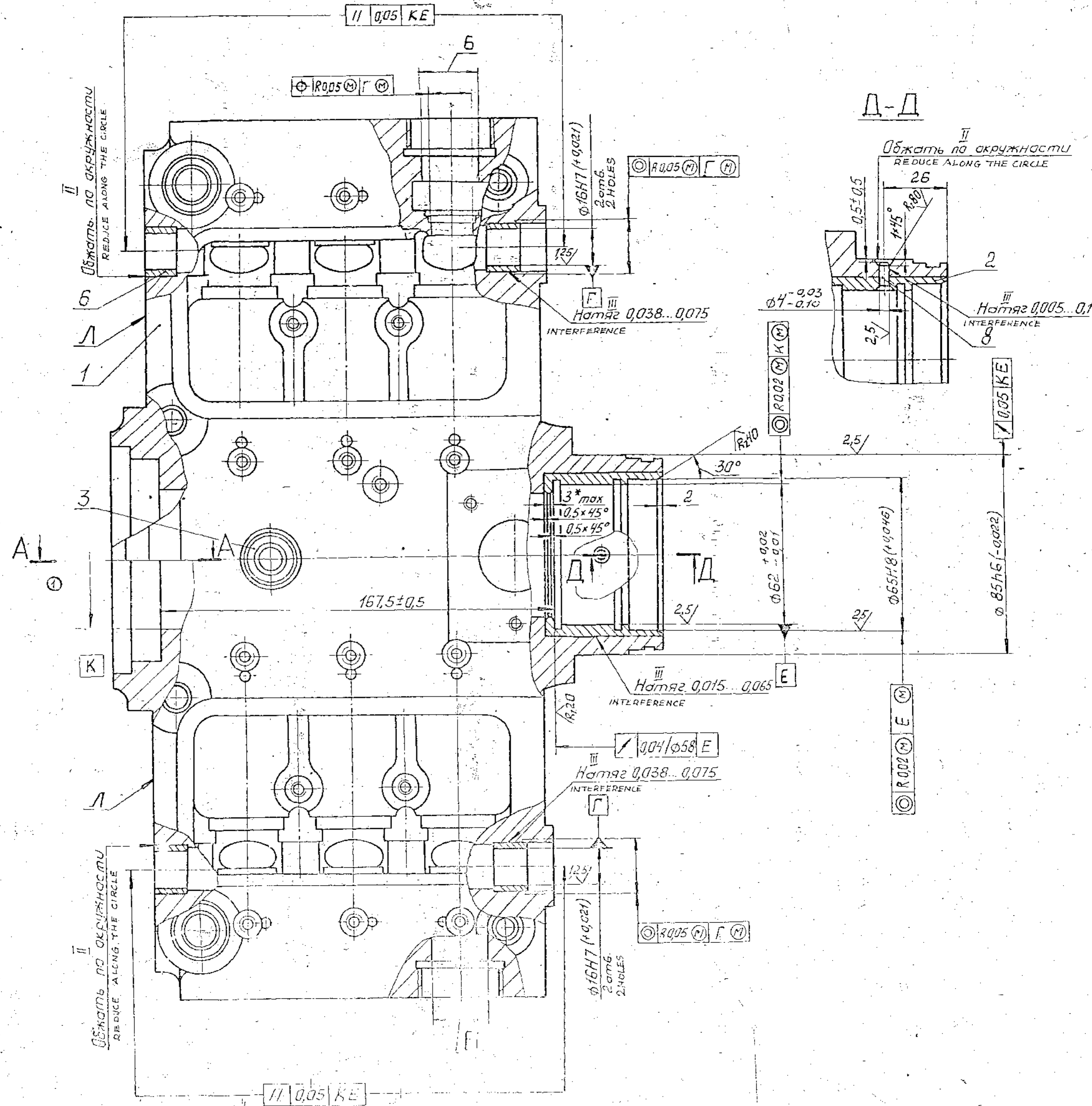
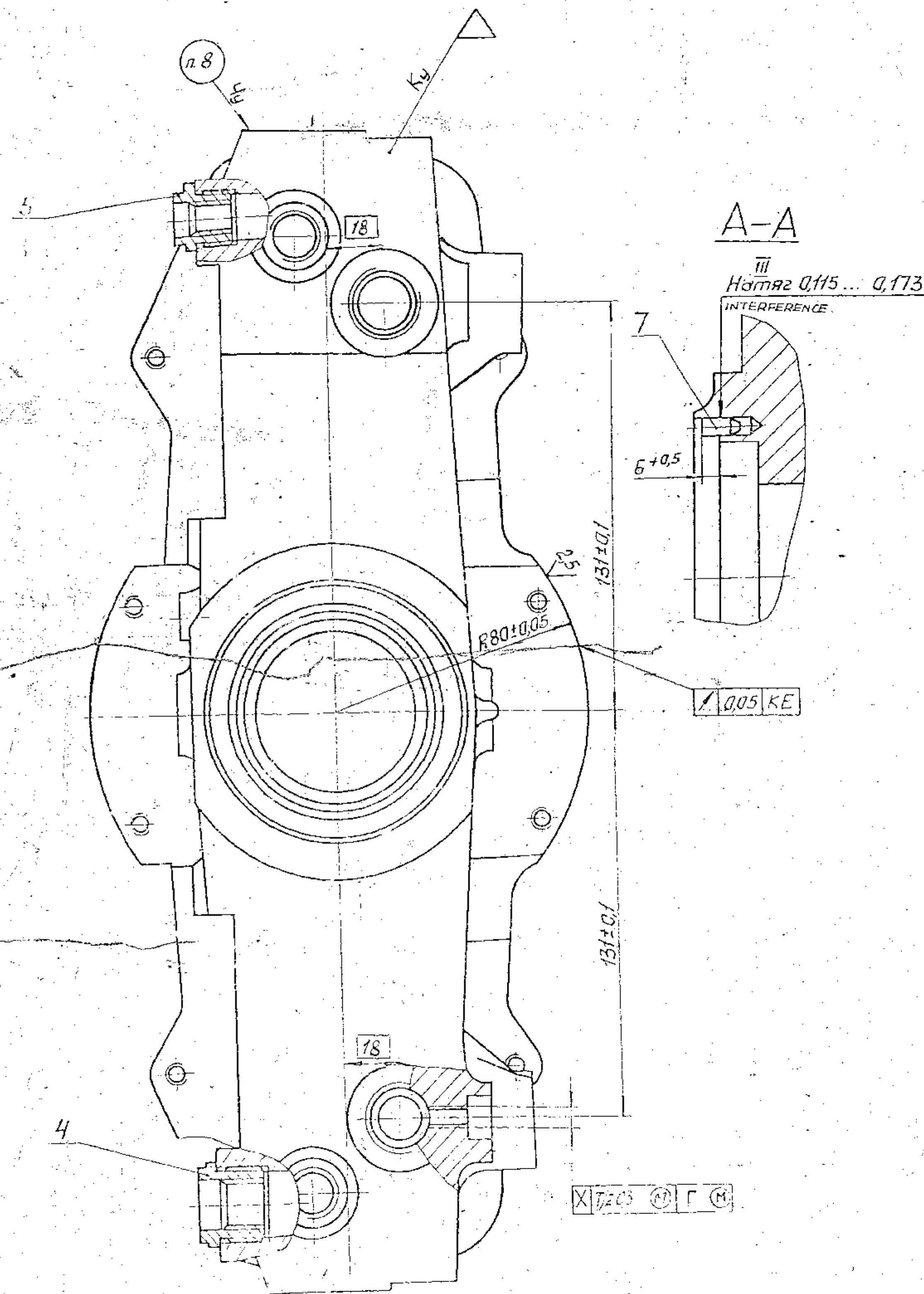
DRAWING NUMBER

352-47

ISSUE DATE

NATURE OF AMENDMENTS





1. Допуск параллельности оси отверстия Г относительно плоскости, проходящей через оси крайних отверстий Б, не более 0,05 мм на длине корпуса.
 2. В развернутых отверстиях Г резьба должна перемещаться плавно.
 3. После установки резьбовых втулок (поз.3,4,5) внутренняя резьба втулки дообработана.
 4. Допуск перпендикулярности торцевых втулок (поз.3,4,5) среднему диаметру внутренней резьбы не более 0,05 мм. Допускается подтарцевка на 0,1...0,5 мм.
 5. Допуск прямолинейности торца Л по плоскости прилегания сопрягаемой детали не более 0,03 мм.
 6. На сопрягающиеся с корпусом насоса торцы втулок (поз.3,4,5) и прилегающие к ним 2...4 нитки резьбы нанести лак 33Ш по инструкции И 240-280/75.
 7. *Размер для справок.
 8. При отработке в записи маркировать СБ.20-27-01-7; шрифт ПО-5, ГОСТ 2930-62.

1. Parallelism allowance of the common axis of Г hole relative to the plane passing through the axes of two extreme Б holes is 0,05 mm max along the body length.
2. The rack should move smoothly in the reamed holes Г without seizing.
3. Calculate the inner thread of the bushings after the installing of the thread bushings (pos.3,4,5).
4. Squareness allowance of the faces of the bushings (pos.3,4,5) of the inner pitch diameter is 0,05 mm max. It's allowed to face at 0,1...0,5 mm.
5. Straightness allowance of Л face along the adjoining plane of the mating part is 0,03 mm max.
6. Put varnish 33Ш on the faces of the bushings (pos.3,4,5) mating with the pump body and on 2...4 threads of screw adjoining to them according to instruction И 240-280/75.
7. *Reference dimension.
8. Brand СБ.20-27-01-7 on the spares; type ПО-5, COST 2930-62.

PILOT SAMPLE SHOULD BE REMOVED BY A H & P BEFORE BULK PRODUCTION.
 EST. MASS: 8,605 Kg
 TO BE STAMPED OR MARKED WHERE INDICATED THIS # LETTERS
 ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R. LIGHT SIDE R. INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

| | | | |
|------------------------|---------|--------------------------------------------------|----------------|
| DRW | DATE | MATERIAL | USED ON |
| CHD | 16.8.59 | | СБ.20-27-01-7 |
| ICD | | | |
| APP | | CONTROLLER OF QUALITY ASSURANCE (HEAVY VEHICLES) | |
| DATE | | AVAIL | |
| SCALE | 1:1 | TITLE | FUEL PUMP BODY |
| DIMENSIONS IN | | TOLERANCE ON DIMS UNLESS OTHERWISE STATED | |
| ALL THREADS CONFORM TO | | D'S LOT NUMBER | СБ.20.27.01-7 |
| | | CHAW NO NUMBER | |



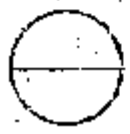
USED ON
CB 20-27-05-7

SUPERSEDES C6 20-27-01-4
I/L CREATED BASED ON RUSSIAN ORIGINAL ISSUE-I NOTIFICATION No 1677#853

| | | | | |
|---|---------------|--|---------------------------------------------------------|---|
| | C6 20-27-01-7 | | FUEL PUMP BODY | |
| | & ITEM LIST | | | |
| | W 240-280/75 | | INSTRUCTION FOR PART INSTALLING ON THE SEAL 33 W. | |
| 1 | 20-27-20-7 | | FUEL PUMP BODY | 1 |
| 2 | 20-27-330-1 | | SLEEVE | 1 |
| 3 | 20-27-335-2 | | BUSHING | 1 |
| 4 | 20-29-35 | | BUSHING | 2 |
| 5 | 20-29-36 | | BUSHING | 2 |
| 6 | 327-21 | | BUSHING | 4 |
| 7 | 352-47 | | DOWEL PIN 5hp X 20 | 1 |
| 8 | 20-52-01 | | DOWEL PIN 4 X 10 | 1 |

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | | | |
|-------|--------------------|----------------------|-----------------------------------------------------------|----------------|----------------------|
| ISSUE | DATE | NATURE OF AMENDMENTS | ISSUE | DATE | NATURE OF AMENDMENTS |
| DRN | <i>Jalankis</i> | | CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI | | |
| CHD | | | TITLE: | | |
| TEC. | <i>Jalankis</i> | | FUEL PUMP BODY | | |
| APPD | <i>[Signature]</i> | | SHT. No. 1 OF 1 | D-S-CAT NUMBER | ITEM LIST FOR |
| DATE | 16-2-93 | | | | C620-27-01-7 |







DRAWING NUMBER
20-27-330-1

Rz 40 (✓)

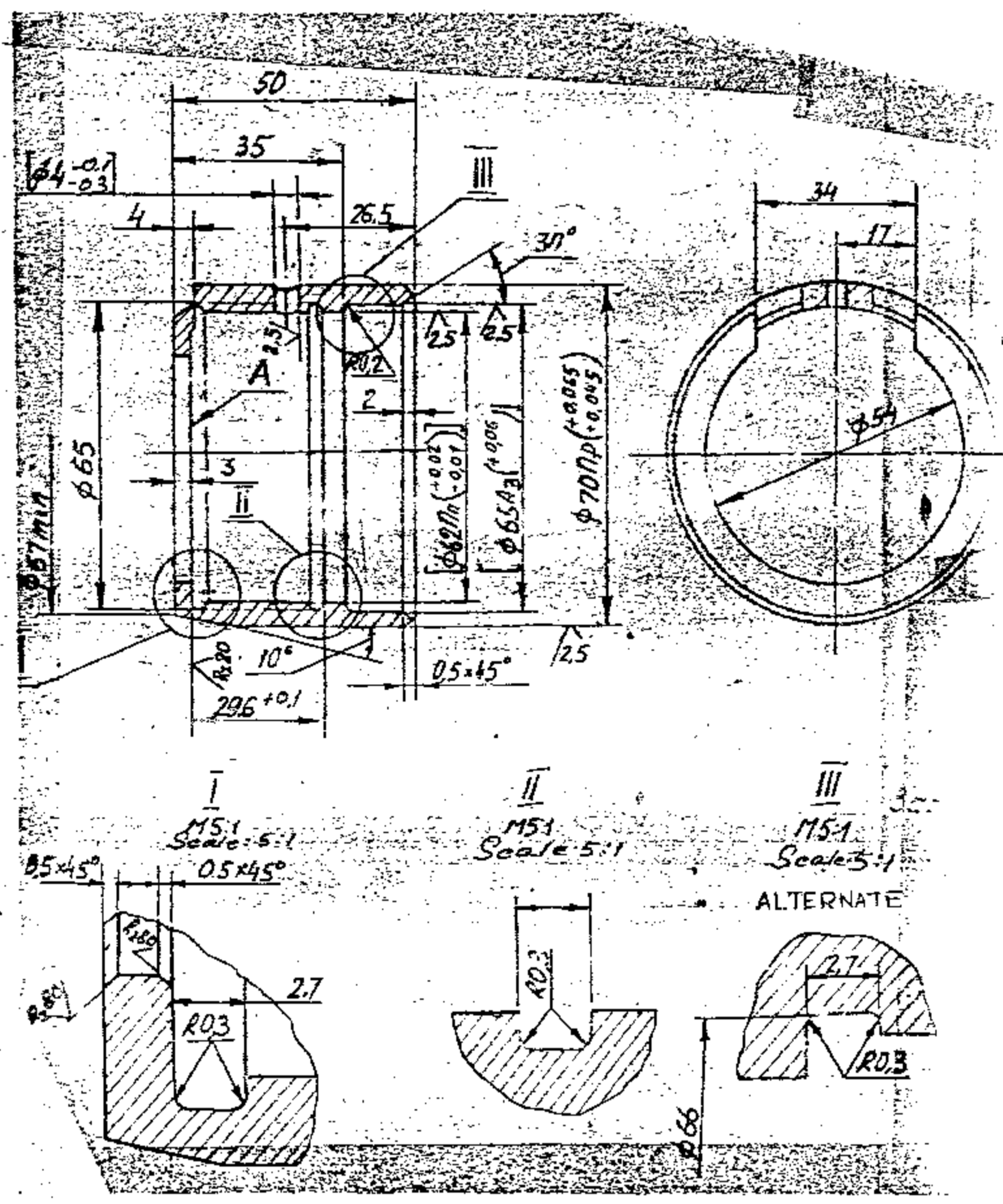
EXPLANATORY NOTE:

Material Quoted : 45 GOST 1050-74
 Alternative material quoted : steel 30,40,50 as per GOST 1050-74
 Chemical Composition

| Grade of steel | C | Si | Mn | Cr | P | S | Cu | Ni |
|----------------|-------|-------|-------|------|-------|-------|------|------|
| | | | | | | | | |
| 30 | 0.27- | 0.17- | 0.50- | 0.25 | 0.035 | 0.040 | 0.25 | 0.25 |
| | 0.35 | 0.37 | 0.80 | | | | | |
| 40 | 0.37- | 0.17- | 0.50- | 0.25 | 0.035 | 0.040 | 0.25 | 0.25 |
| | 0.45 | 0.37 | 0.80 | | | | | |
| 45 | 0.42- | 0.17- | 0.50- | 0.25 | 0.035 | 0.040 | 0.25 | 0.25 |
| | 0.50 | 0.37 | 0.80 | | | | | |
| 50 | 0.47- | 0.17- | 0.50- | 0.25 | 0.035 | 0.040 | 0.25 | 0.25 |
| | 0.55 | 0.37 | 0.80 | | | | | |

Mechanical Properties:

| Grade of steel | Tensile strength kgf/mm ² (min) | Yield Point kgf/mm ² (min) | Elongation % | Reduction in area % (min) | Impact strength kgf/cm ² (min) |
|----------------|-----------------------------------------------|------------------------------------------|-----------------|---------------------------------|-------------------------------------------------|
| 30 | 50 | 30 | 21 | 50 | 8 |
| 40 | 58 | 34 | 19 | 45 | 6 |
| 45 | 61 | 36 | 16 | 40 | 5 |
| 50 | 64 | 38 | 14 | 40 | 4 |



- unspecified limit deviations of dimensions are as follows: for holes - As per A7
shafts - As per B7
others - As per CM7
- Perform machining of surface A and also as per dimensions given in the square brackets in the mechanical unit.
- Alternate material is steel 30,40,50 as per GOST 1050-74

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. WT. 0.250 kg.
 TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
 ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED. MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

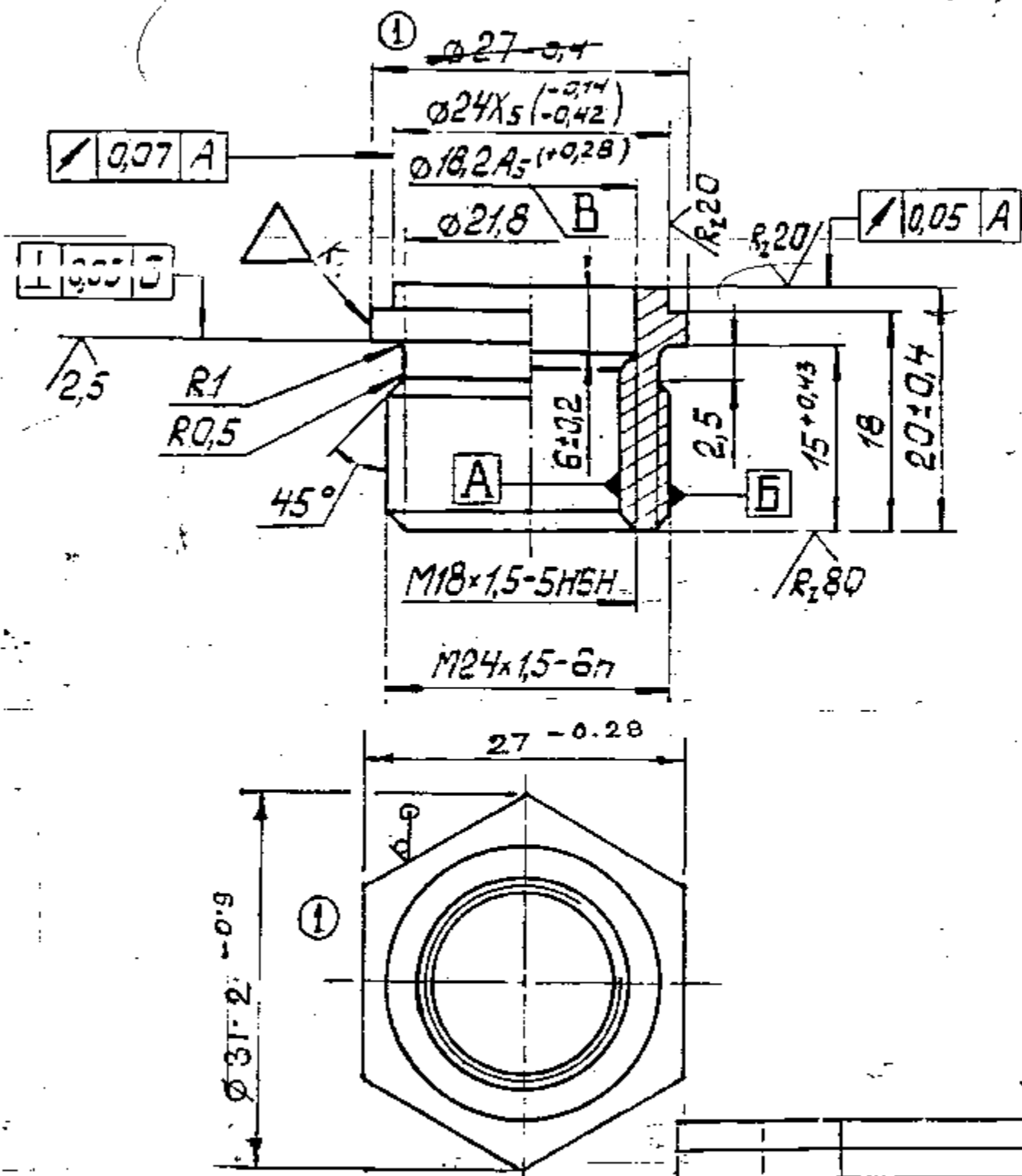
| | | | | | |
|---------------|---------|-------------------------------------------------------|-----------------|----------------|---------------|
| DRG | 100004 | MATERIAL :- | 45 GOST 1050-74 | USED ON :- | CB 20-27-01-7 |
| CHD | 100004 | CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) | | A V A D I | |
| TED | 100004 | SCALE :- 1:1 | | TITLE | |
| APPD | 17-4-87 | DIMENSIONS IN | | SLEEVE | |
| DATE | 17-4-87 | TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69 | | DRAWING NUMBER | |
| SCALE | 1:1 | ALL THREADS TO CONFORM TO | | 20-27-330-1 | |
| DIMENSIONS IN | | ISSUE DATE NATURE OF AMENDMENTS | | | |





DRAWING NUMBER

20-29-35



1. Alt. Matl. IS STEEL 40,50 GOST 1050-74.
2. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS :
FOR HOLES - AS PER A7, FOR SHAFTS - AS PER B7
FOR OTHERS - AS PER CM7
3. THREAD TRACE ON SURFACE 'B' IS PERMITTED.
4. COATING : CADMIUM-PLATED, 9 MICRONS THICK
OILED ABSENCE OF COATING ON THE INTERNAL SURFACE IS ALLOWED.

①A EQUIVALENT MATERIAL
STEEL 080M40 (EN8) TO BS: 970 OR
45 CB TO IS: 7570

①* 27-5 GOST 8560-78
45 GOST 1051-74

KVD No. 63465

PLOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE
BULK PRODUCTION

EST. WT. TO BE STAMPED OR MARKED WHERE
0.03 Kg INDICATED THIS ≡ LETTERS!

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS
OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT SIDE
INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE

| | | | | | | | |
|--------------|---------|------------------------------------------------|---------|----------------|---------------------|----------------|---------------|
| FORM | 1 | DATE | 17-3-80 | MATERIAL | Hex bar | USED ON: | C620-27-01-4 |
| ISSUED | | SCALE | 2:1 | | 45 GOST 1050-74 * ① | | C6 20-29-08-B |
| APPROVED | | CONTROLLER OF QUALITY ASSURANCE HEAVY VEHICLES | | | | | |
| | | AYAT | | | | | |
| | | DIMENSIONS IN mm | | TITLE | | | |
| | | TOLERANCE ON DIMS | | BUSHING | | | |
| | | UNLESS OTHERWISE | | | | | |
| | | STATED IS: 2102-85 | | | | | |
| | | ALL THREADS TO | | D S CAT NUMBER | | DRAWING NUMBER | |
| | | CONFORM TO | | | | 20-29-35 | |
| REQUIRE DATE | 10-7-10 | NATURE OF AMENDMENTS | | | | | |



SIZE A3

