



**60239—**  
**2014**

**IEC 60239:2005**  
**Electrodes en graphite pour les fours a arc — Dimensions et denomination**  
**(IDT)**



2014

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2 109 « » -

3 27 2014 . 52- . -

4 60239:2005 « -  
 » (IEC 60239:2005 «Electrodes  
 graphite pour les fours a arc - Dimensions et denomination», IDT). -

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1 ) « 1.0—2012 ( 8).  
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 (gost.ru)

1	.....	1
2	.....	1
3	.....	1
4	.....	3
4.1	.....	3
4.2	.....	4
4.3	.....	4
4.4	.....	5
4.5	.....	9
5	.....	9
5.1	.....	9
5.2	.....	10
5.3	.....	10
6	.....	10
6.1	.....	10
6.2	.....	11
6.3	.....	11
(        )	.....	12
(        )	.....	17
(        )	.....	18

sions et denomination),

60239:2005 «  
» (IEC 60239:2005, Electrodes en graphite pour les fours a arc - Dimen-  
IEC 27 «  
».

1997 .,

Electrodes en graphite pour les fours a arc — Dimensions et denomination

— 2015—07—01

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60239

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60050-841:2004 (IEV) - 841: -

(IEC 60050-841:2004 Versidn Oficial en Espafiol - Vocabulario electrotécnico internacional. Parte 841: Electrotermia industrial)

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60050—841.

3.1 (electrode arc furnace): 1—4.

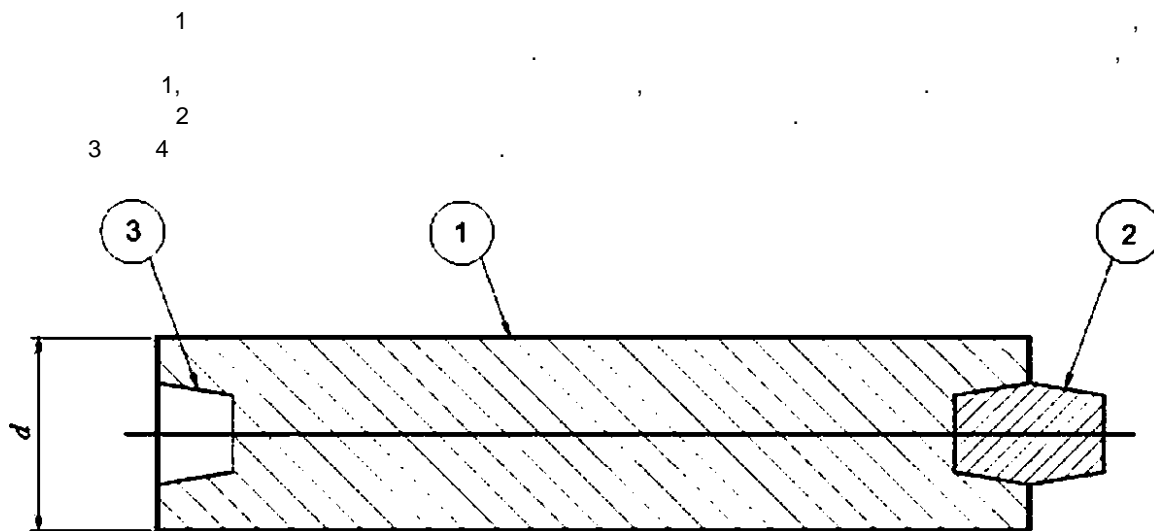
(IEV 841-26-38).

3.2	(graphite electrodes for electric arc furnaces):	-
3.3	(mono-electrode):	-
3.4	(electrode column):	-
3.5	(nipple electrode):	-
3.6	(threaded socket electrode):	-
3.7	(threaded connection):	-
3.8	(cone):	-
3.9	(tilt angle):	-
3.10	(diameter cone nipples):	-
3.11	(outside diameter of the nipple):	-
3.12	(nominal diameter of the nipple):	-
3.13	(diameter cone socket):	-
3.14	(internal diameter of the thread):	-

3.15 (hollow):

4

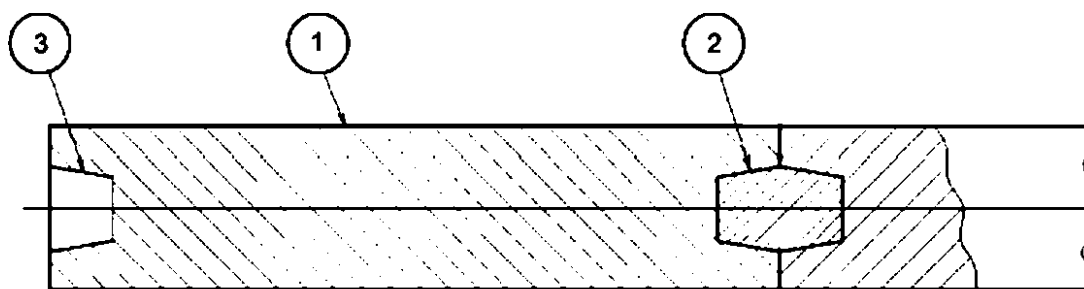
4.1



*I*

*d*— ; 2— ; *l*— ; 3— ;

1—



1— электрод; 2 — ниппель; 3 — гнездо

2—

4.2

1.

4.3

( )

2.

1—

	d		
75	78	73	1000/1200/1500
100	103	98	1000/1200/1500
130	132	127	1000/1200/1500
150	154	149	1200/1500/1800
175	179	174	1200/1500/1800
200	205	200	1500/1800
225	230	225	1500/1800
250	256	251	1500/1800/2100
300	307	302	1500/1800/2100
350	358	352	1500/1800/2100/2400
400	409	403	1500/1800/2100/2400
450	460	454	1500/1800/2100/2400/2700
500	511	505	1800/2100/2400/2700
550	562	556	1800/2100/2400/2700
600	613	607	2100/2400/2700
650	663	659	2100/2400/2700
700	714	710	2100/2400/2700
750	765	761	2400/2700

1 ( . 3.15)

3

2



2—

1000	1050	925	925	800
1200	1250	1100	1100	975
1500	1600	1400	1400	1225
1800	1900	1700	1700	1525
2100	2225	1975	1975	1825
2400	2525	2275	2275	2125
2700	2900	2550	2550	2400

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4.4

1/3 ( 1/6).

- 4 1 (25,4 ), ( 4) -

75 750 ;

- 3 1 (25,4 ), ( 3) -

225 550 .

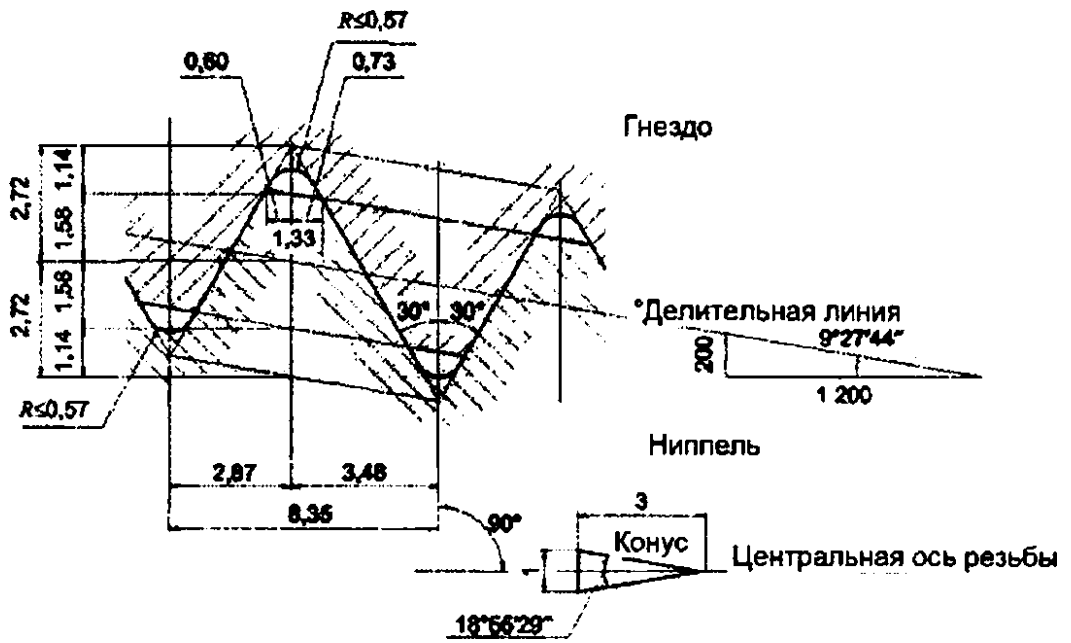
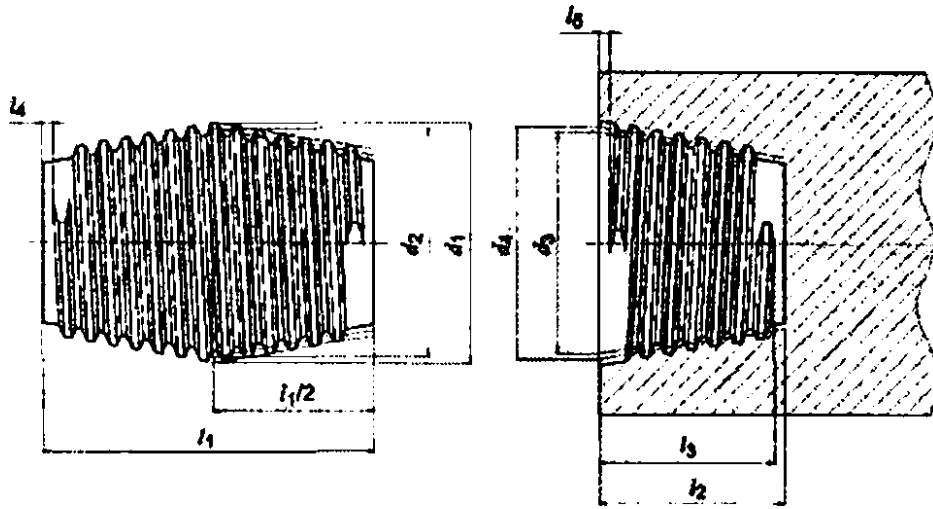
350 700 4

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350 500

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4  
3.



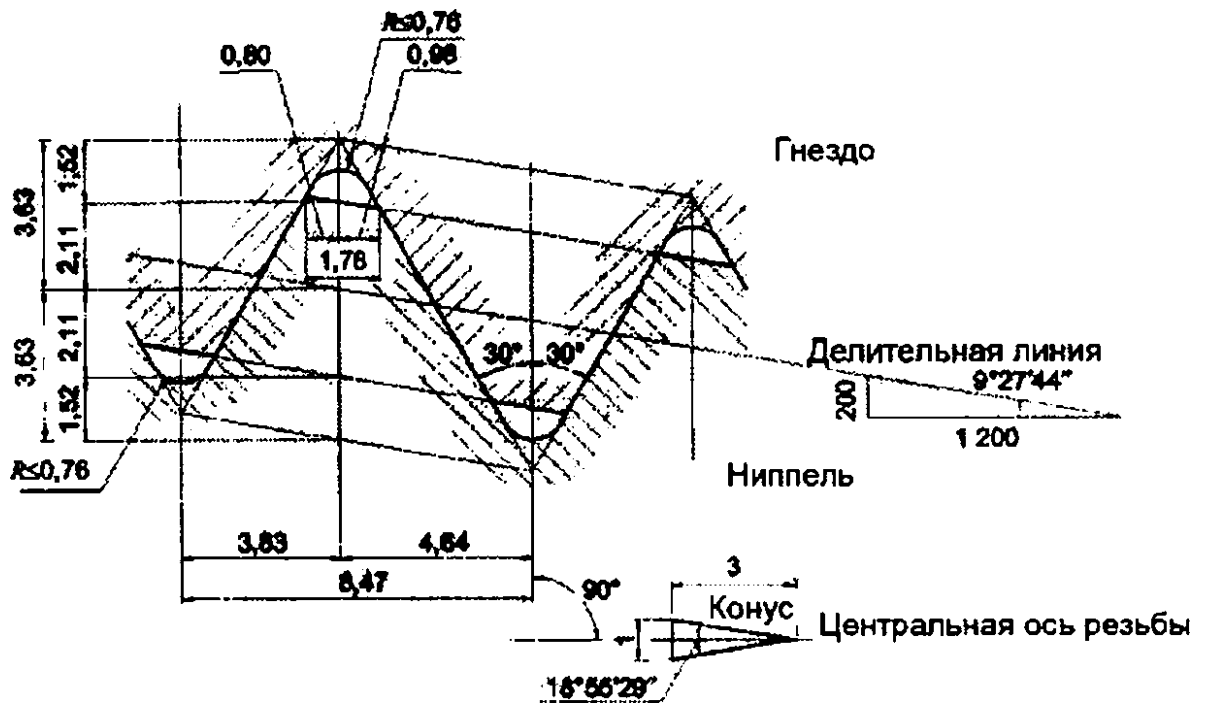
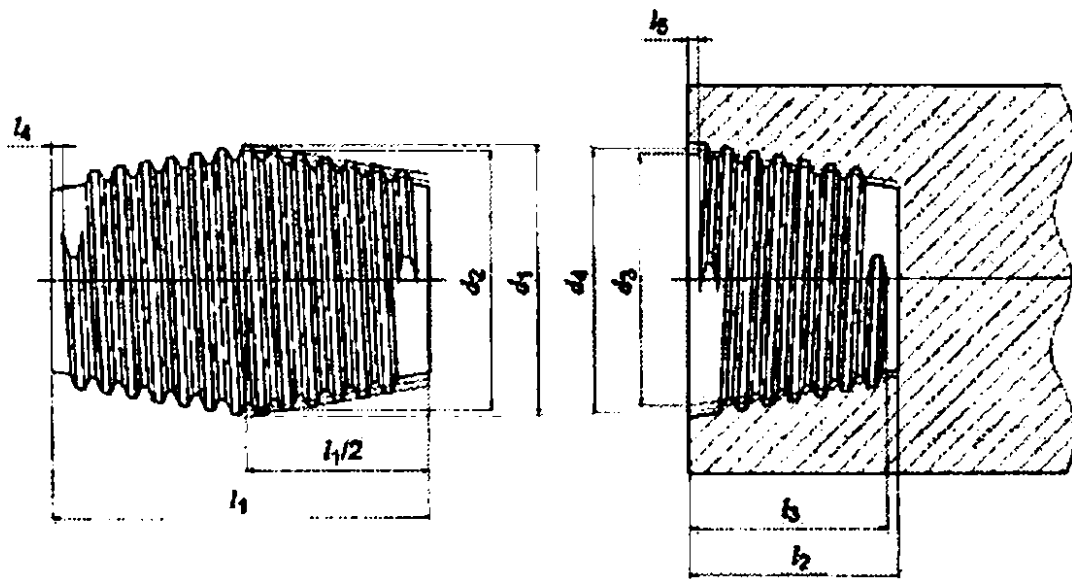
3 —

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		ch	ch	l.	h	( )
75	45T4N	42,88	46,04	76,20	44,10	40,10
100	69T4N	66,69	69,85	101,60	56,80	52,80
130	79T4N	76,22	79,38	127,00	69,50	65,50
150	92T4N	88,92	92,08	139,70	75,90	71,90
175	107T4N	104,79	107,95	165,10	88,60	84,60
200	122T4N	119,08	122,24	177,80	94,90	90,90
225	139T4N	136,54	139,70	177,80	94,90	90,90
250	152T4N	149,24	152,40	190,50	101,30	97,30
300	177T4N	174,64	177,80	215,90	114,00	110,00
350	203T4N	200,04	203,20	254,00	133,00	129,00
350	203T4L	200,04	203,20	304,80	158,40	154,40
400	222T4N	219,09	222,25	304,80	158,40	154,40
400	222T4L	219,09	222,25	355,60	183,80	179,80
450	241T4N	238,14	241,30	304,80	158,40	154,40
450	241T4L	238,14	241,30	355,60	183,80	179,80
500	269T4N	266,72	269,88	355,60	183,80	179,80
500	269T4L	266,72	269,88	457,20	234,60	230,60
550	298T4N	295,29	298,45	355,60	183,80	179,80
550	298T4L	295,29	298,45	457,20	234,60	230,60
600	317T4N	314,34	317,50	355,60	183,80	179,80
600	317T4L	314,34	317,50	457,20	234,60	230,60
650	355T4N	352,44	355,60	457,20	234,60	230,60
650	355T4L	352,44	355,60	558,80	285,40	281,40
700	374T4N	371,49	374,65	457,20	234,60	230,60
700	374T4L	371,49	374,55	558,80	285,40	281,40
750	406T4N*	403,24	406,40	609,60	310,80	306,80
1		ch				ch.
2					d*	3,16
3						-
*	406T4N			584,20		

4

4.



4 —

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						( ) h
225	139T3N	135,49	139,70	203,20	107,60	103,60
250	155T3N	151,36	155,57	220,00	116,00	112,00
300	177T3N	172,95	177,16	270,90	141,50	137,50
350/400	215T3N	211,69	215,90	304,80	158,40	154,40
350/400	215T3L	211,69	215,90	355,60	183,80	179,80
400/450	241T3N	237,09	241,30	338,70	175,30	171,30
400/450	241T3L	237,09	241,30	355,60	183,80	179,80
500	273T3N	268,84	273,05	355,60	183,80	179,80
500	273T3L	268,84	273,05	457,20	234,60	230,60
550	298T3L	294,24	298,45	457,20	234,60	230,60
1	<b>&amp;2</b>					
2	<b>&lt;h</b>				4,22	
3						

4.5

4.5.1

), «N» «L» 1 (25.4

**273T3N.**

**317T4N;**

**317T4L.**

4.5.2

**600 \* 2100 \* 317T4N; 500 \* 1300 \* 273T3N.**

**600 \* 2 100 \* 317T4L.**

4.5.3

« ».

## 5

5.1

4 1 1/3 (25,4 ), ( 4) 1/6).

3 3.

3 1 (25,4 ), ( 4),

4 4.

, .4.4, :

5.2

1 (25,4 ), «N» «L»

- : **317T4N;** **273T3N.**  
 - : **317T4L.**

5.3

**6**

6.1

4) 6 ( ). 5 (

5 — ( 4)

,	-3	(+10)
, h	-2	(+ 8}
, h	(-4)	0
, ls	0	+ 4
,	0	+ 10
,	(-1)	0
, da	0	(+ 0,5)
—		

6—

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h	-3	(+10)
h	-2	(+ 8)
h	(-4)	0
1\$	0	+4
U	0	+ 10
ch	(-1)	0
d <sub>4</sub>	0	(+ 0.5)
—		

6.2

a)

. 3 4 - 1,00 . 3 4. 0,00 . 3 4 **d2**

b)

. 3 4 0,00 \* 0,50 . 3 4

6.3

6.3.1

6.3.2

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.1

.2

.1 — . . .  
1 2

MF 3,4 8

(25,4 ).

: 150 1 500 MF8; 250 1 800 MF4; 350 1 800

**MF3.**

400	a) 3	1	(25,4 ), (MF3)	300
250	b) 4	1	(25,4 ), (MF4)	175
150	c) 8	1	(25,4 ), (MF8)	75

.1 ( MF3), .2 ( MF4) . ( MF8).  
.1 — . . .

.1 — 300-400 ( MF3)

	l.	h	.	1	l<	'
300	166,49	158,44	119,02	171,45	162,41	273,00
350	192,09	183,85	134,70	196,85	187,81	317,50
400	217,49	209,25	160,53	222,25	231,21	361,95



.2 —

175-250 ( MF4)

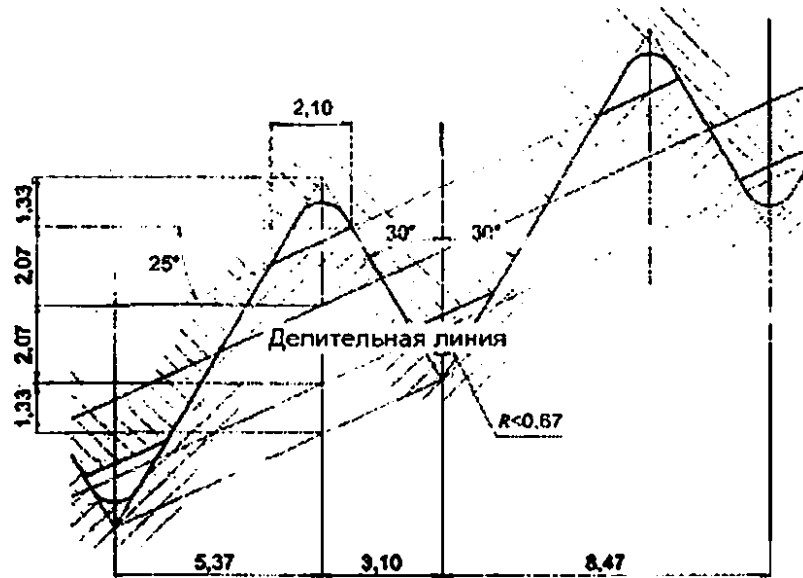
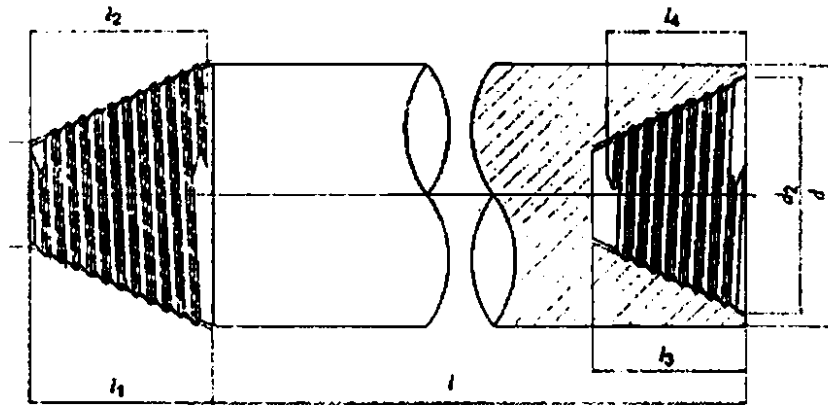
	$l$	$h$	$d_i$		$14$	$d_2$
175	106,36	99,44	74,45	109,54	101,85	160,02
200	119,06	112,14	94,55	122,24	114,55	182,04
225	131,76	124,81	95,99	134,94	127,55	205,23
250	144,46	137,54	104,44	147,64	139,95	225,55

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75-150 ( MF4)

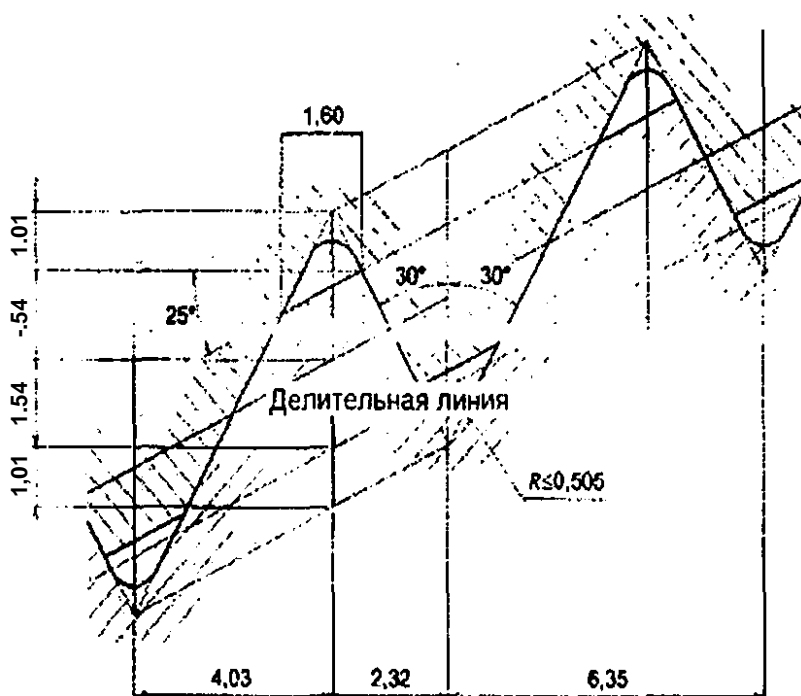
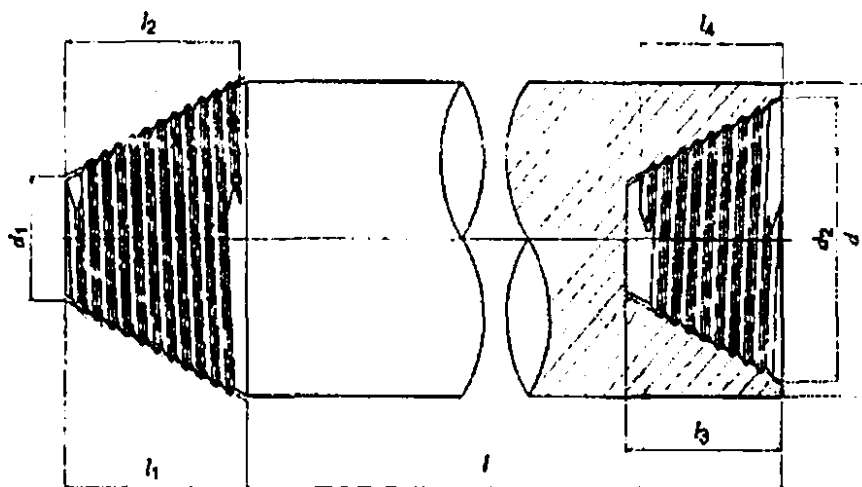
	$d_i$	$d_j$	$d_s$
75	29,79	67,76	28,57
100	29,79	88,40	28,57
130	54,49	116,98	53,29
150	67,26	139,20	53,10

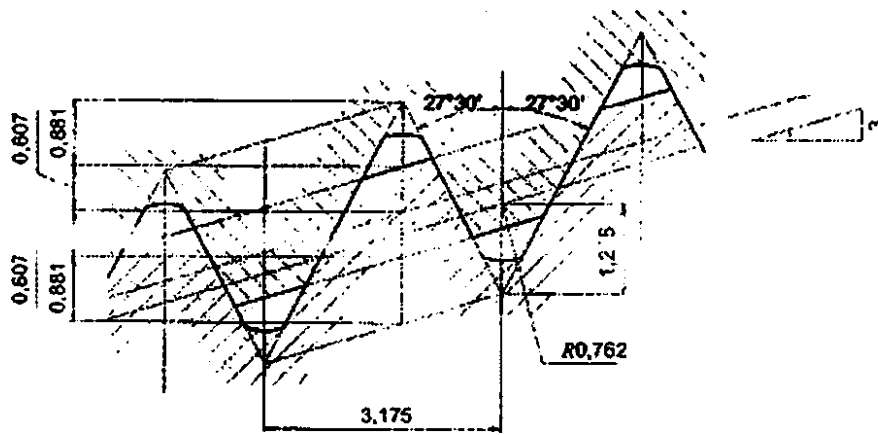
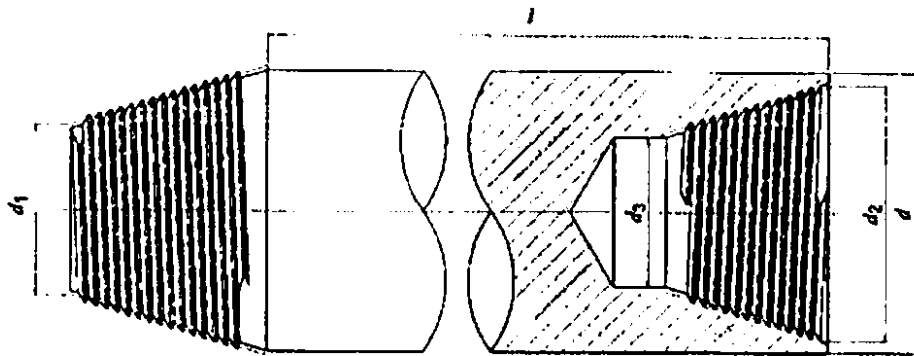
Размеры в миллиметрах



.1 —

MF3





MF8

( )

.2

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- a)
- b)
- c)
- d)

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- )
- ;
- 0)

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