

Deformationsberäkning med hjälp av FEM-programmet CALFEM.

```
LMAT K 21 21
ZERO
LMAT R 21 1
GOTO 2
P/2
GOTO 5
-P/2
GOTO 14
-P/2
GOTO 20
P/2
ZERO
BEAM2E EP1 EK1
BEAM2E EP2 EK2
BEAM2E EP3 EK3
ELIN EN1 EK1 K
ELIN EN2 EK2 K
ELIN EN3 EK3 K
SOLVE K U R B
4
1 0
2 0
12 0
20 0
PRINT U
BEAM2S EP1 EN1 U
BEAM2S EP2 EN2 U
BEAM2S EP3 EN3 U
```



Balktyp A

A2

Spricklasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0762713	640.66*10 <sup>-6</sup>	33*10 <sup>9</sup>
2,5	0.225	0	0.0762713	640.66*10 <sup>-6</sup>	33*10 <sup>9</sup>
3,4	0.450	0	0.0672713	640.66*10 <sup>-6</sup>	33*10 <sup>9</sup>

Brukslasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0762713	640.66*10 <sup>-6</sup>	33*10 <sup>9</sup>
2,5	0.225	0	0.0065129	2.3288*10 <sup>-6</sup>	25*10 <sup>9</sup>
3,4	0.450	0	0.0065129	2.3288*10 <sup>-6</sup>	25*10 <sup>9</sup>

Brottlasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast. modul [Pa]
1,6	0.675	0	0.0024498	1.878*10 <sup>-5</sup>	25*10 <sup>9</sup>
2,5	0.225	0	0.0024498	1.878*10 <sup>-5</sup>	25*10 <sup>9</sup>
3,4	0.450	0	0.0024498	1.878*10 <sup>-5</sup>	25*10 <sup>9</sup>

Balktyp B

A3

Spricklasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0761388	637.67*10 <sup>-4</sup>	33*10 <sup>9</sup>
2,5	0.225	0	0.0761388	637.67*10 <sup>-4</sup>	33*10 <sup>9</sup>
3,4	0.450	0	0.0761388	637.67*10 <sup>-4</sup>	33*10 <sup>9</sup>

Brukslasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0761388	637.67*10 <sup>-4</sup>	33*10 <sup>9</sup>
2,5	0.225	0	0.0039869	9.30703*10 <sup>-6</sup>	25*10 <sup>9</sup>
3,4	0.450	0	0.0039869	9.30703*10 <sup>-6</sup>	25*10 <sup>9</sup>

Brottlasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0016500	7.291*10 <sup>-6</sup>	25*10 <sup>9</sup>
2,5	0.225	0	0.0016500	7.291*10 <sup>-6</sup>	25*10 <sup>9</sup>
3,4	0.450	0	0.0016500	7.291*10 <sup>-6</sup>	25*10 <sup>9</sup>

Balktyp C

A4

Spricklasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.007606	$6.650 \cdot 10^{-4}$	$33 \cdot 10^9$
2,5	0.225	0	0.007606	$6.650 \cdot 10^{-4}$	$33 \cdot 10^9$
3,4	0.450	0	0.007606	$6.650 \cdot 10^{-4}$	$33 \cdot 10^9$

Brukslasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.077606	$6.650 \cdot 10^{-4}$	$33 \cdot 10^9$
2,5	0.225	0	0.01834	$1.4948 \cdot 10^{-4}$	$25 \cdot 10^9$
3,4	0.450	0	0.01834	$1.4948 \cdot 10^{-4}$	$25 \cdot 10^9$

Brottlasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0077656	$1.357 \cdot 10^{-4}$	$25 \cdot 10^9$
2,5	0.225	0	0.0077656	$1.357 \cdot 10^{-4}$	$25 \cdot 10^9$
3,4	0.450	0	0.0077656	$1.357 \cdot 10^{-4}$	$25 \cdot 10^9$

Balktyp D

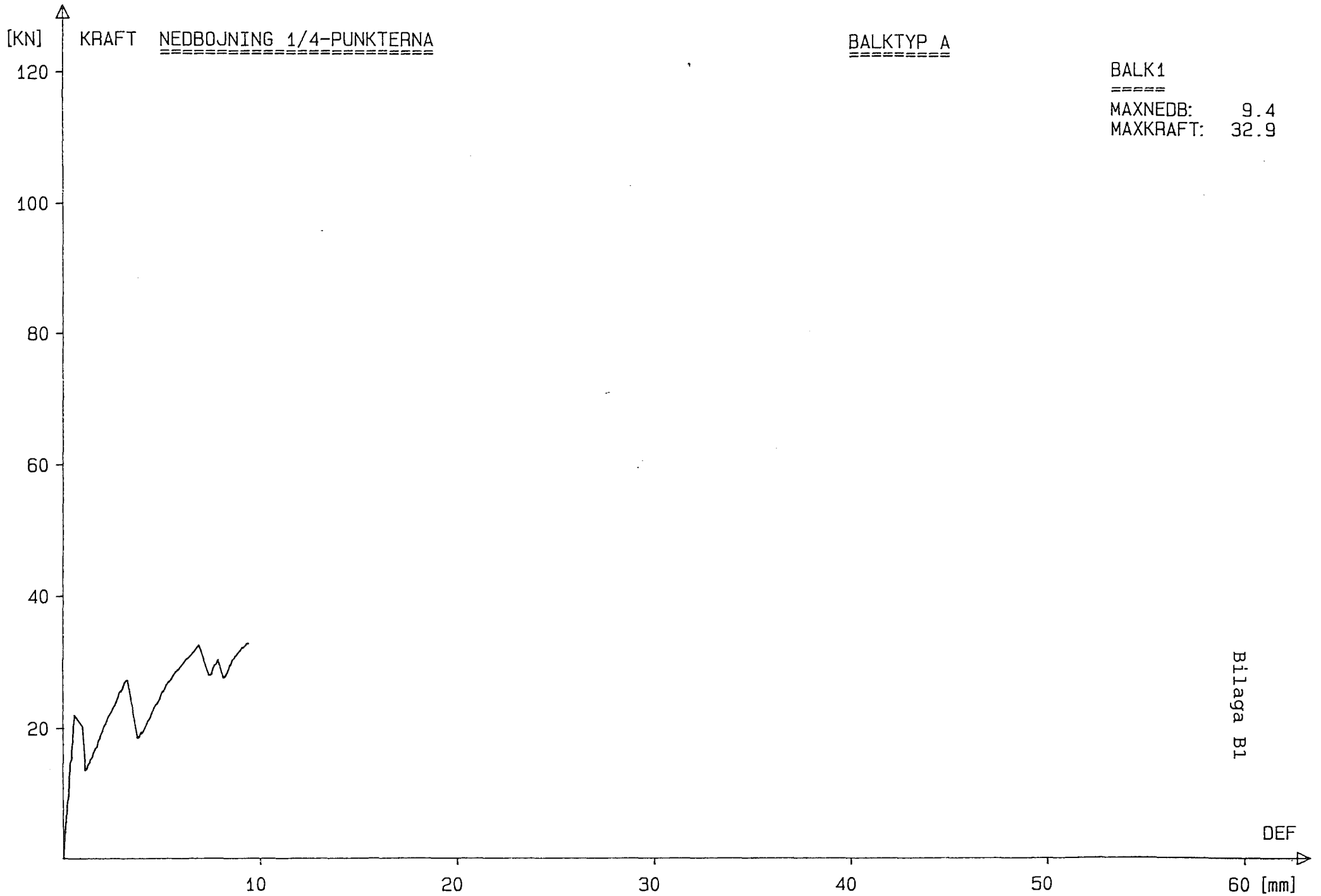
A5

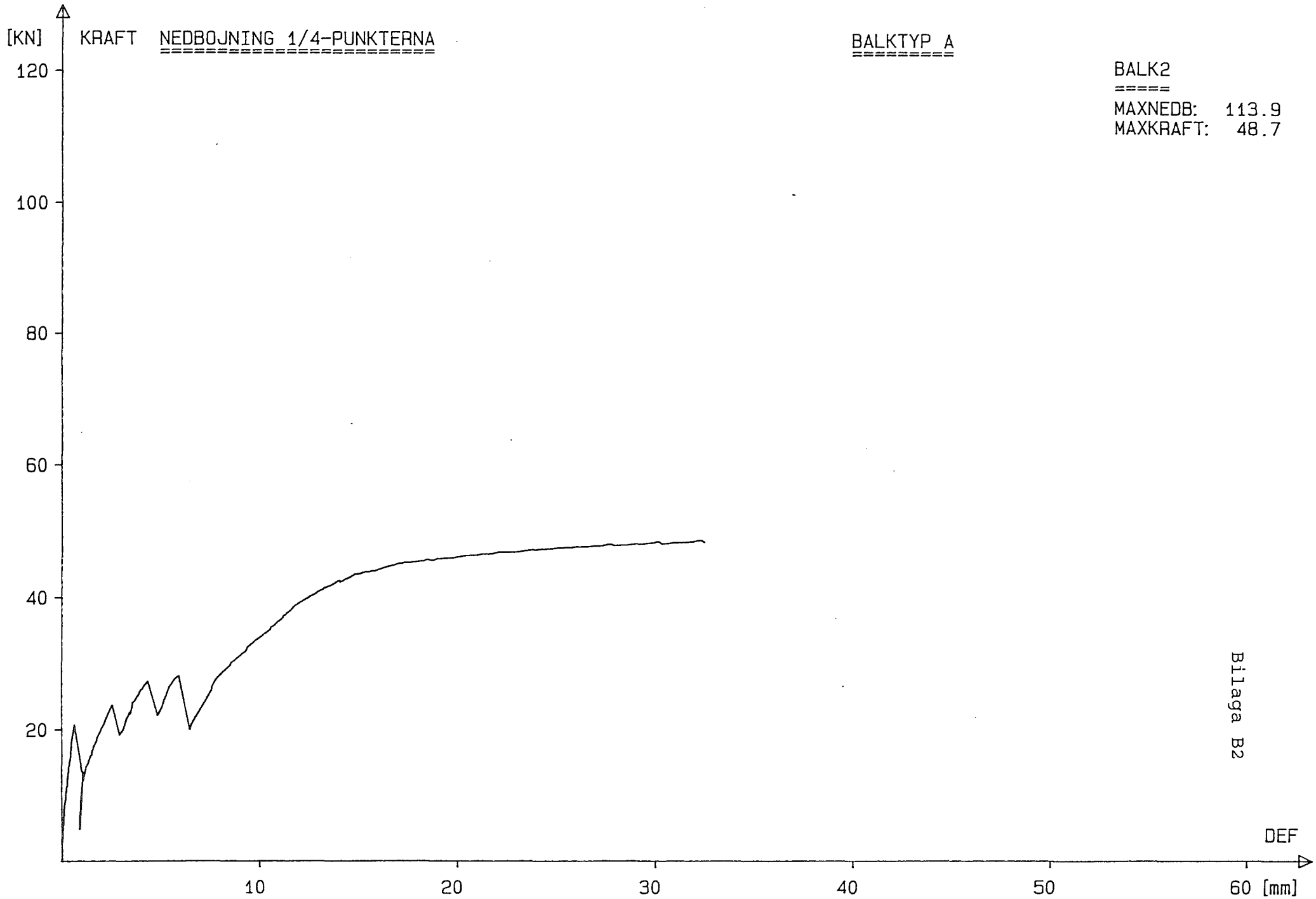
Spricklasten

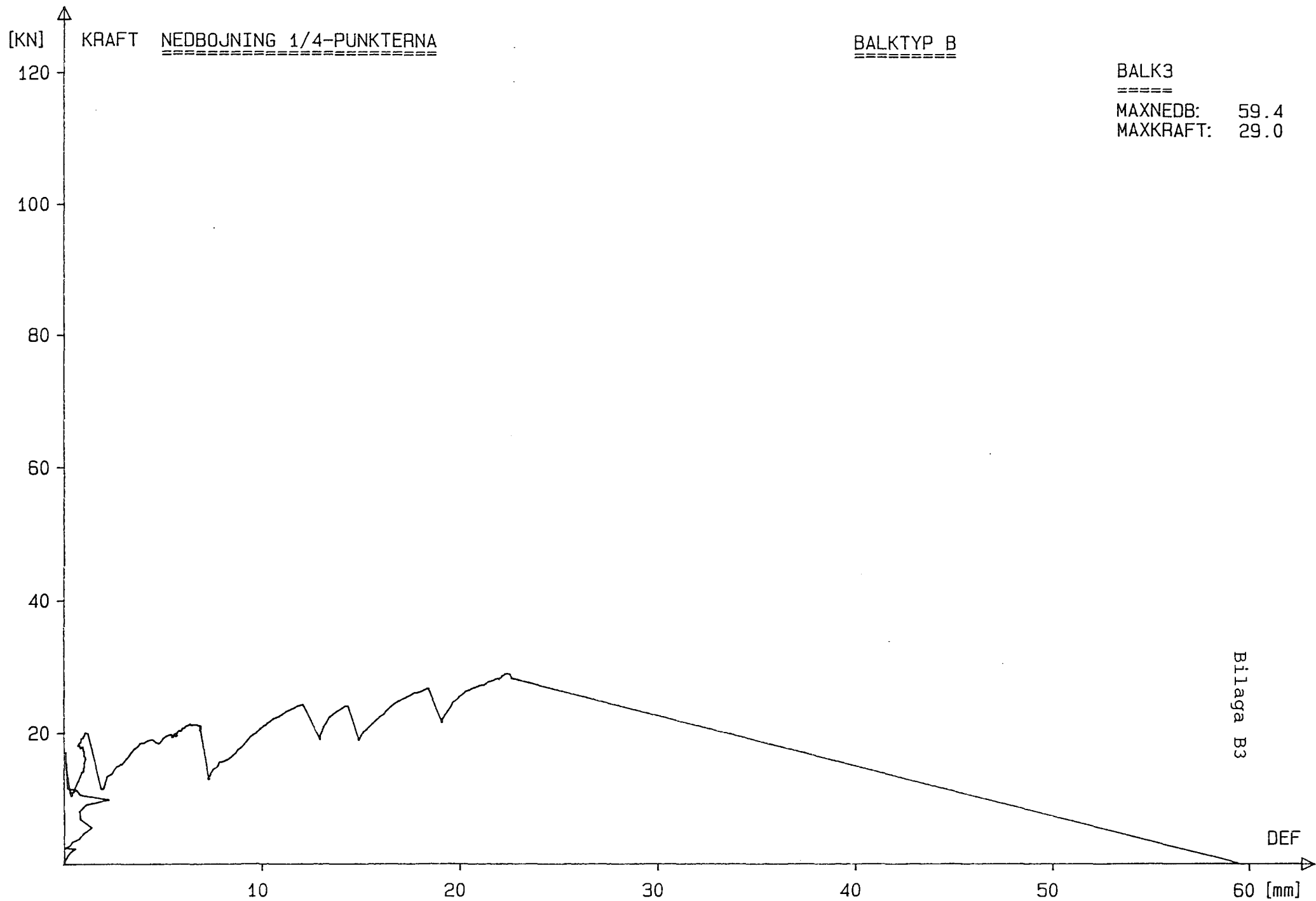
Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0761725	6.388*10 <sup>-4</sup>	33*10 <sup>9</sup>
2,5	0.225	0	0.0761725	6.388*10 <sup>-4</sup>	33*10 <sup>9</sup>
3,4	0.450	0	0.0761725	6.388*10 <sup>-4</sup>	33*10 <sup>9</sup>

Brottlasten

Element	Längd [m]	Vinkel	Area [m <sup>2</sup> ]	Tröghetsm. [m <sup>4</sup> ]	Elast.modul [Pa]
1,6	0.675	0	0.0061764	2.129*10 <sup>-5</sup>	25*10 <sup>9</sup>
2,5	0.225	0	0.0061764	2.129*10 <sup>-5</sup>	25*10 <sup>9</sup>
3,4	0.450	0	0.0061764	2.129*10 <sup>-5</sup>	25*10 <sup>9</sup>







[KN] KRAFT NEDBOJNING 1/4-PUNKTERNA

BALKTYP B

BALK3

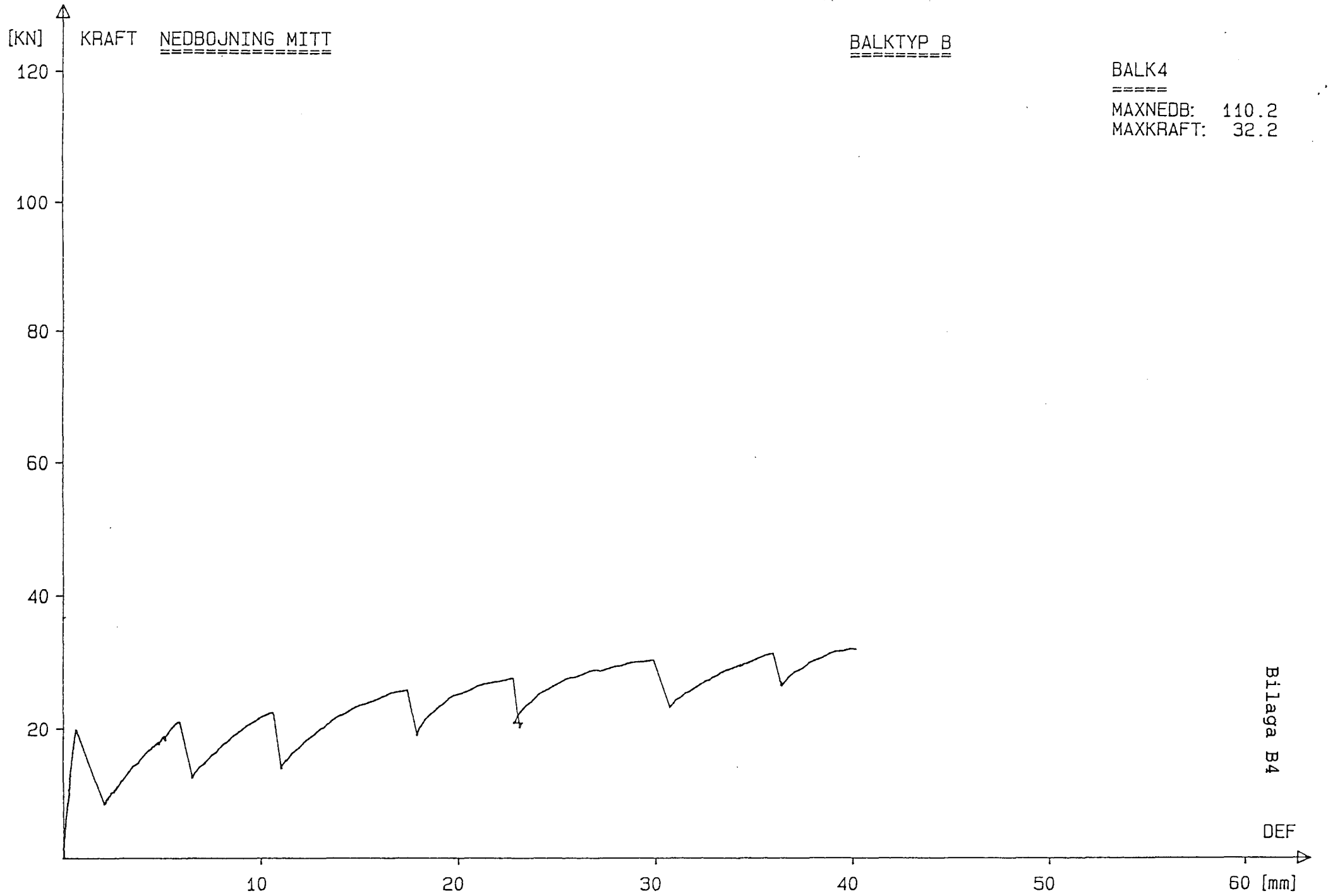
MAXNEDB: 59.4

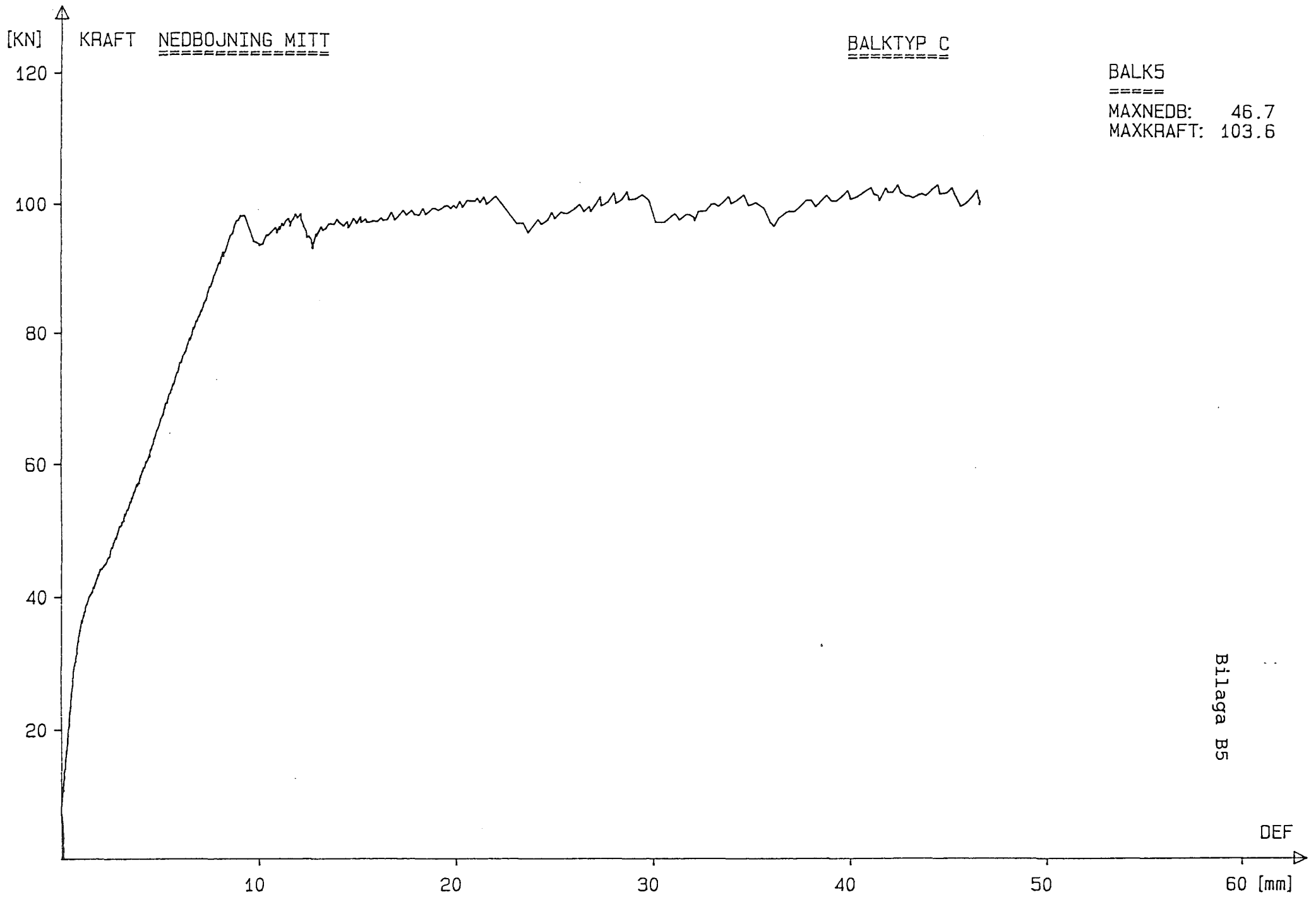
MAXKRAFT: 29.0

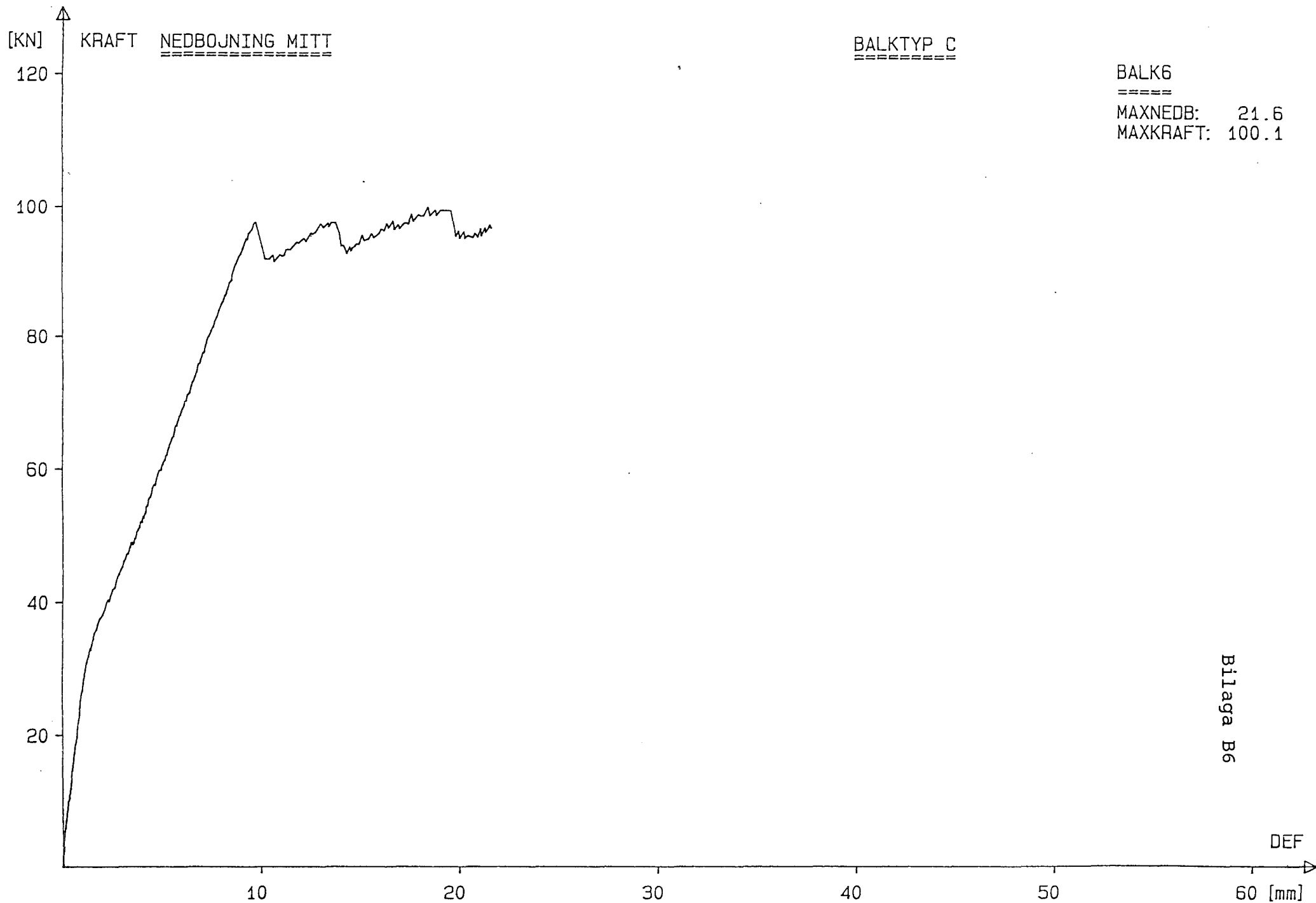
Bilaga B3

DEF

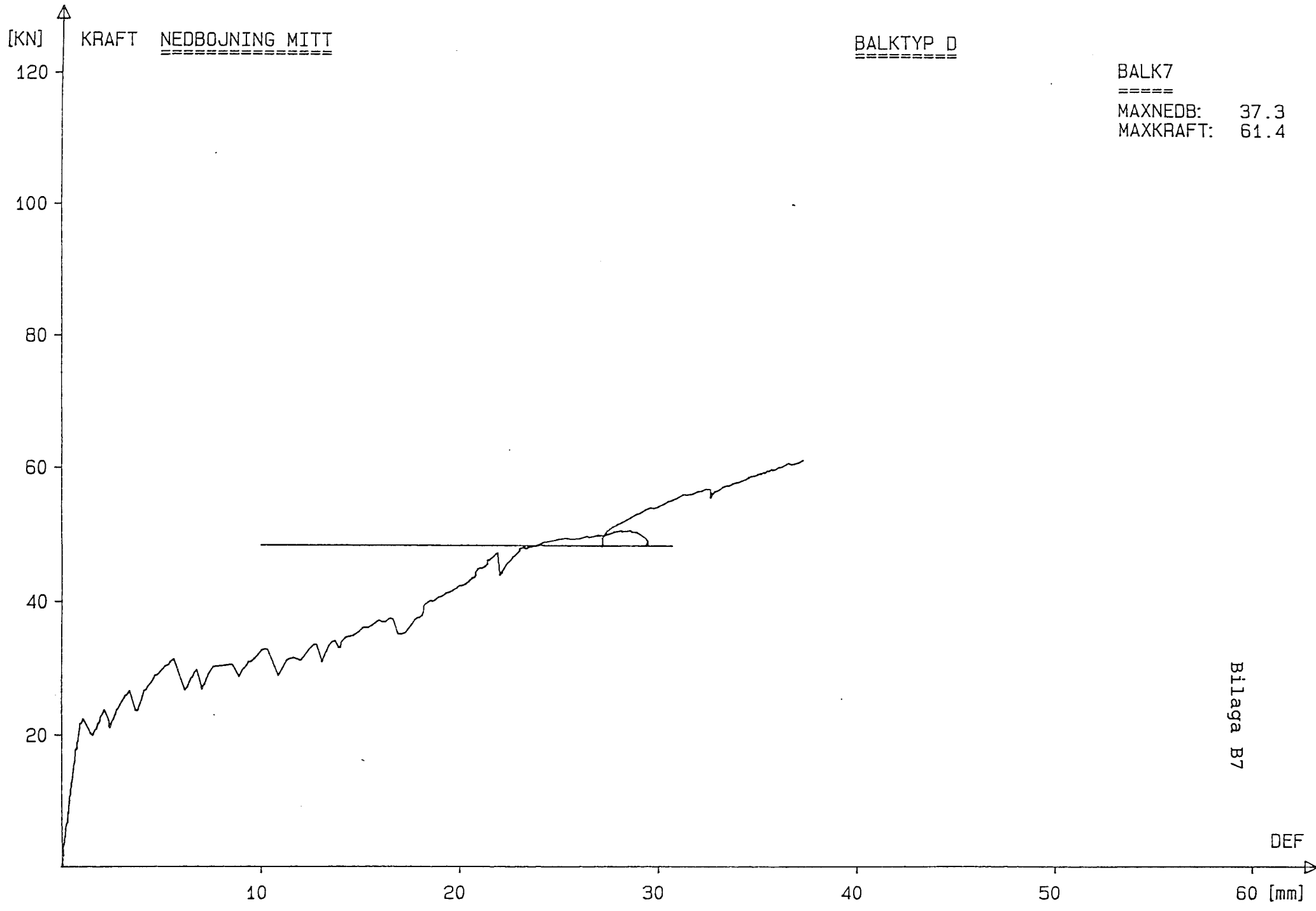




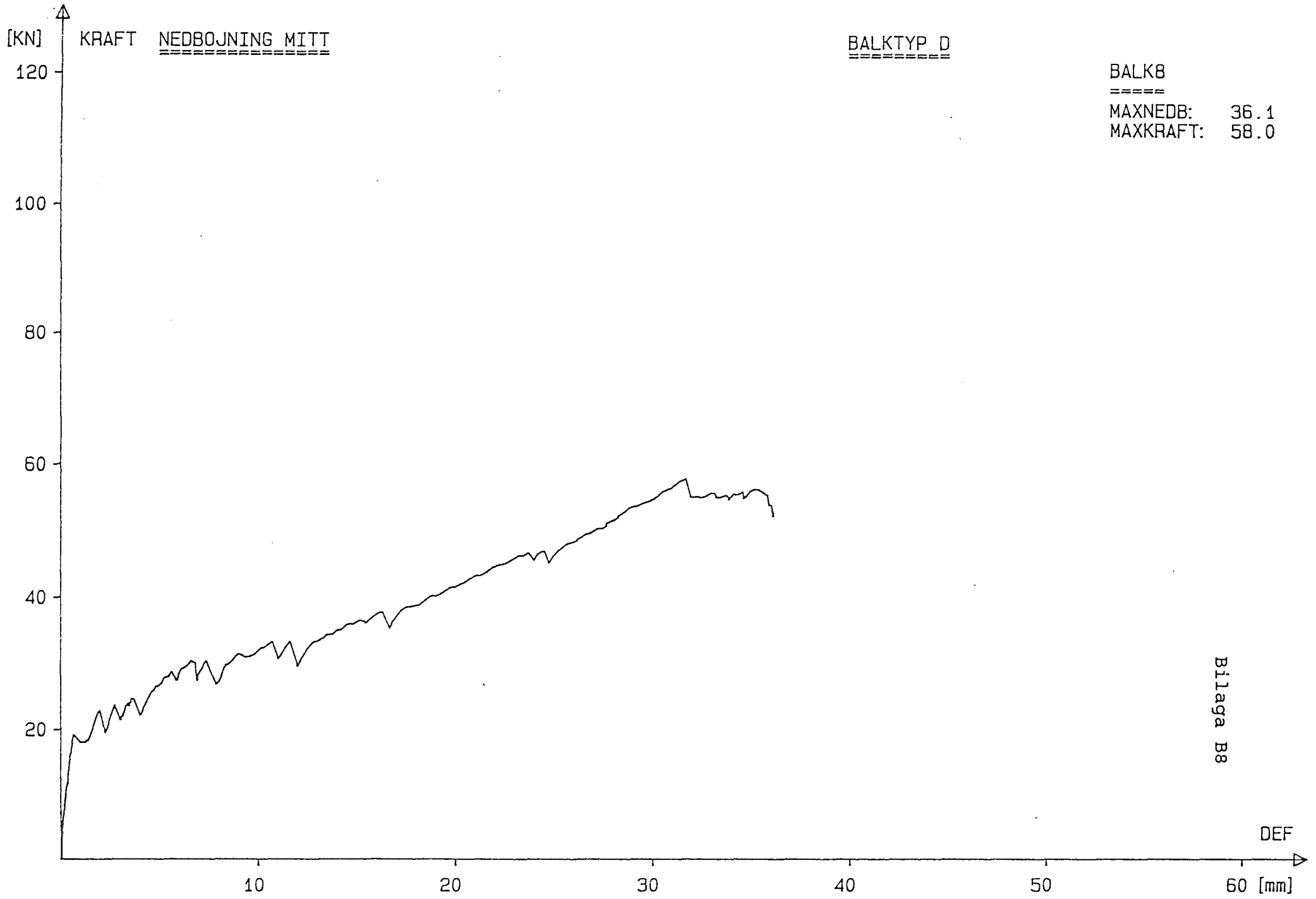


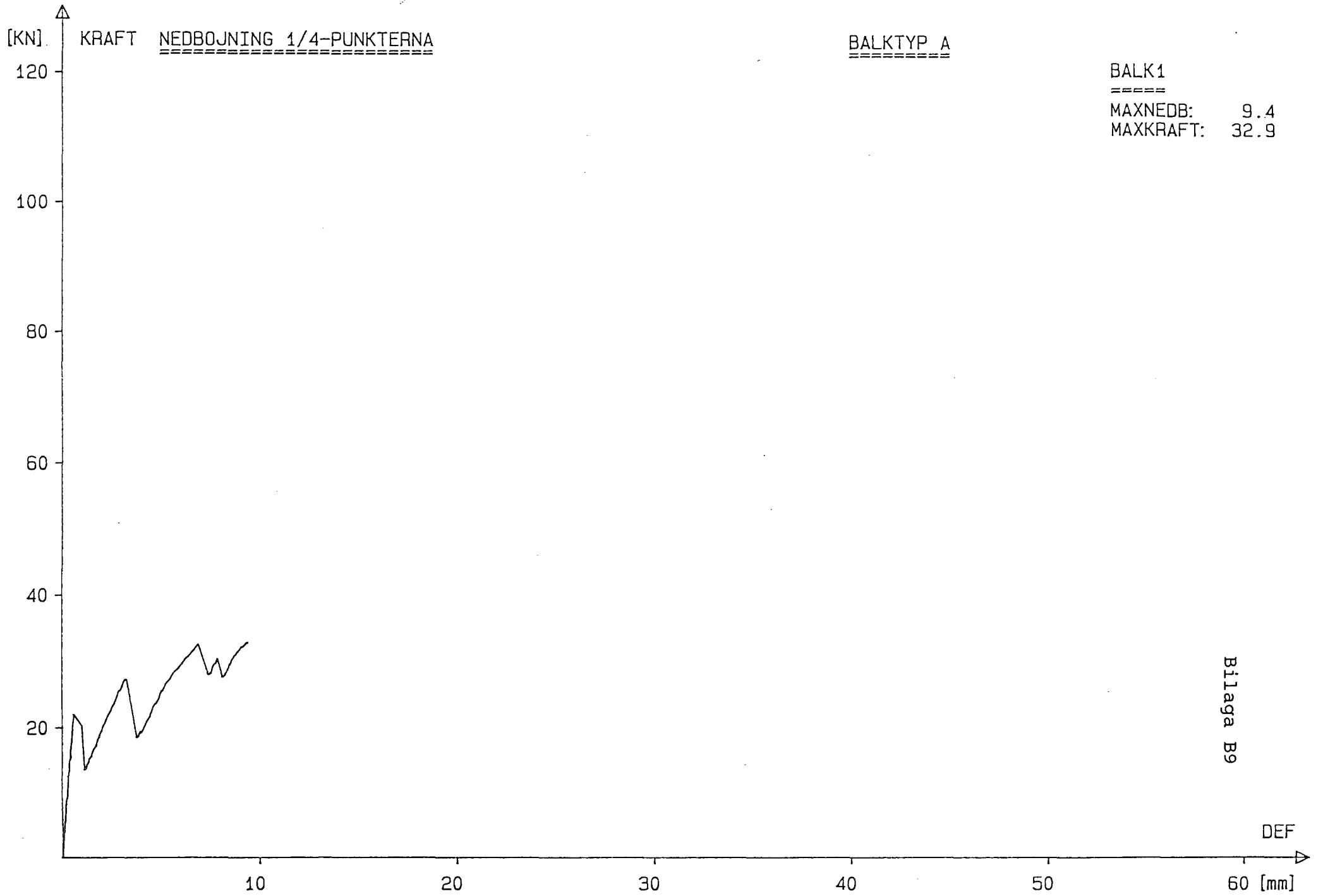


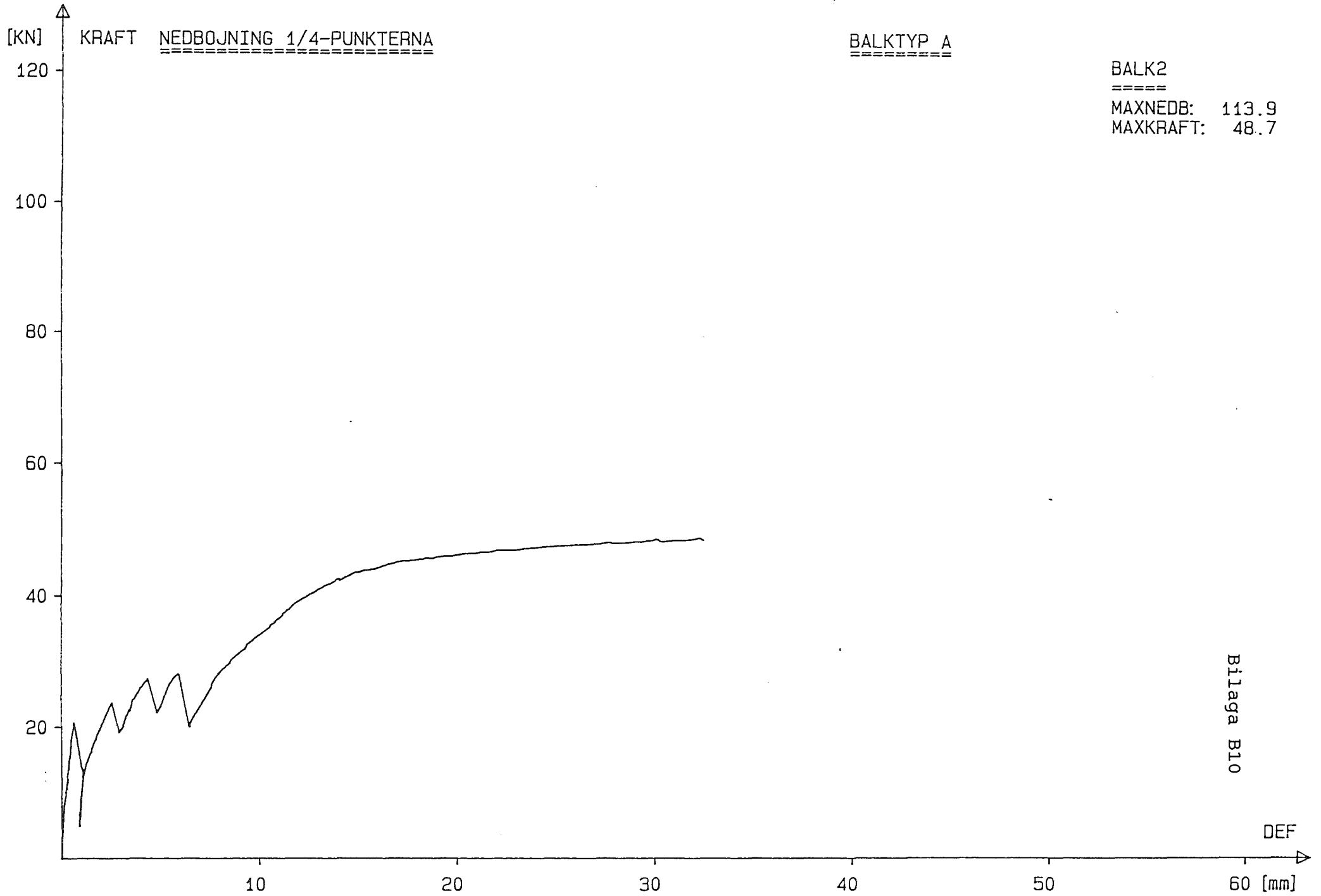
Bilaga B6

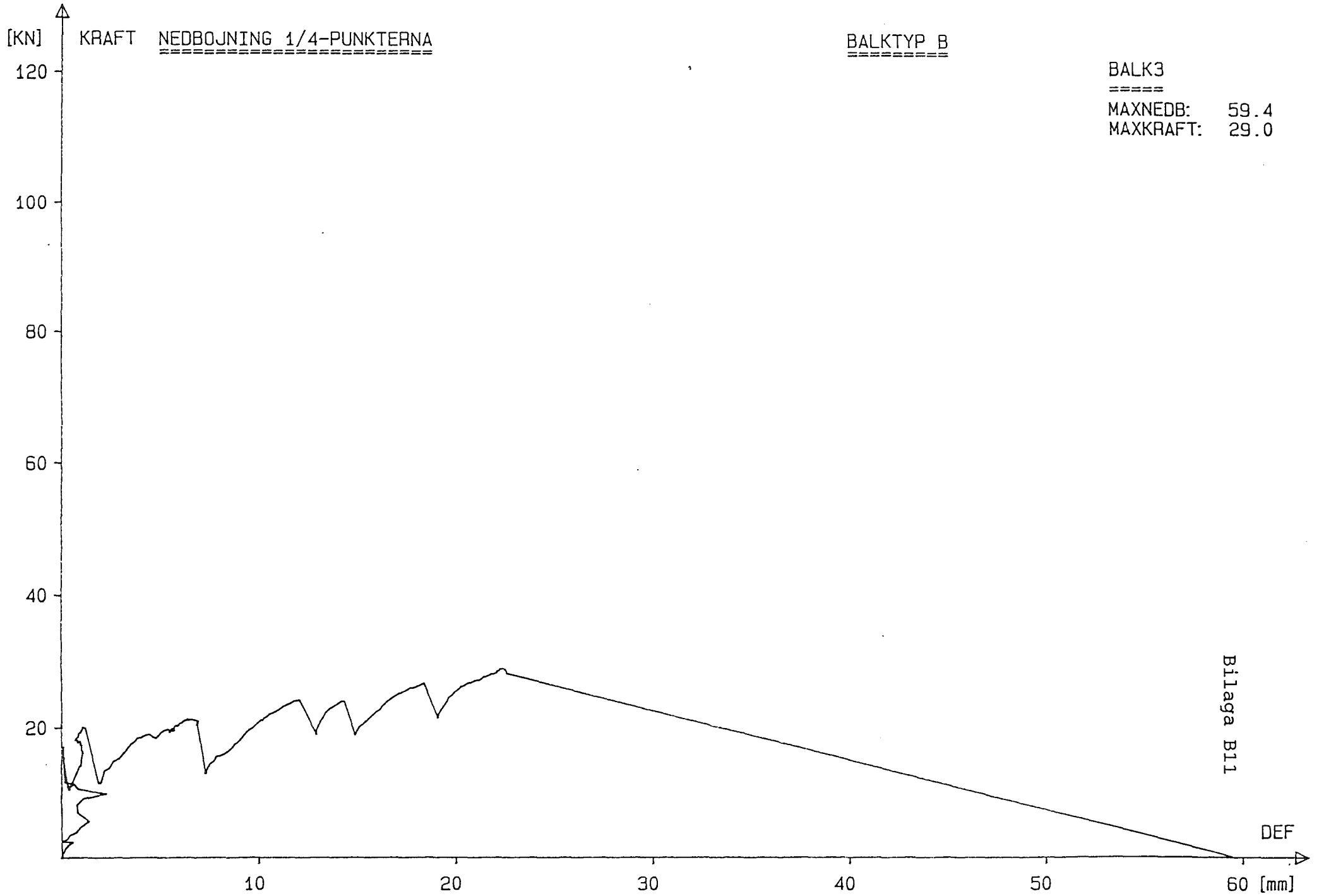


Bilaga B7

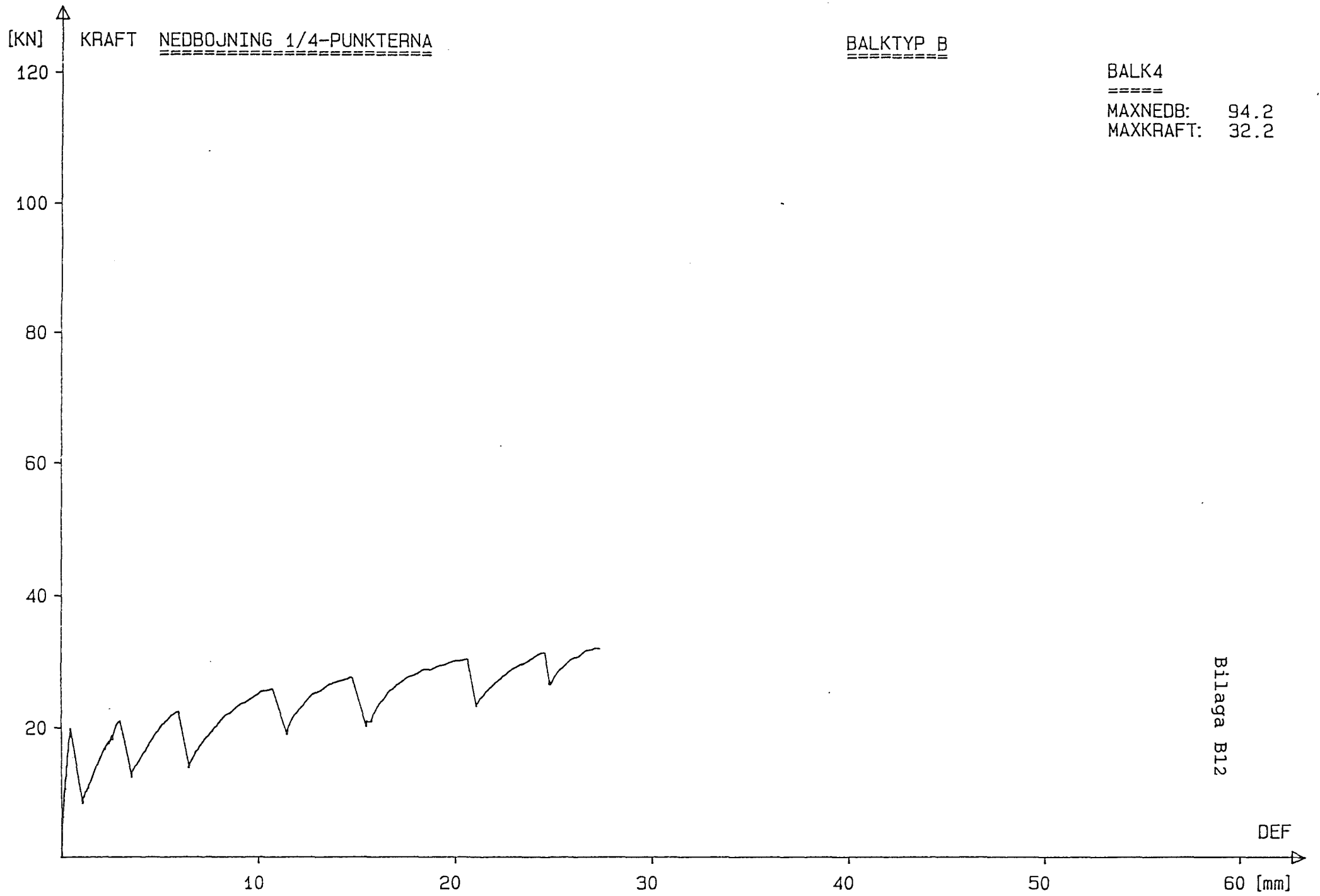


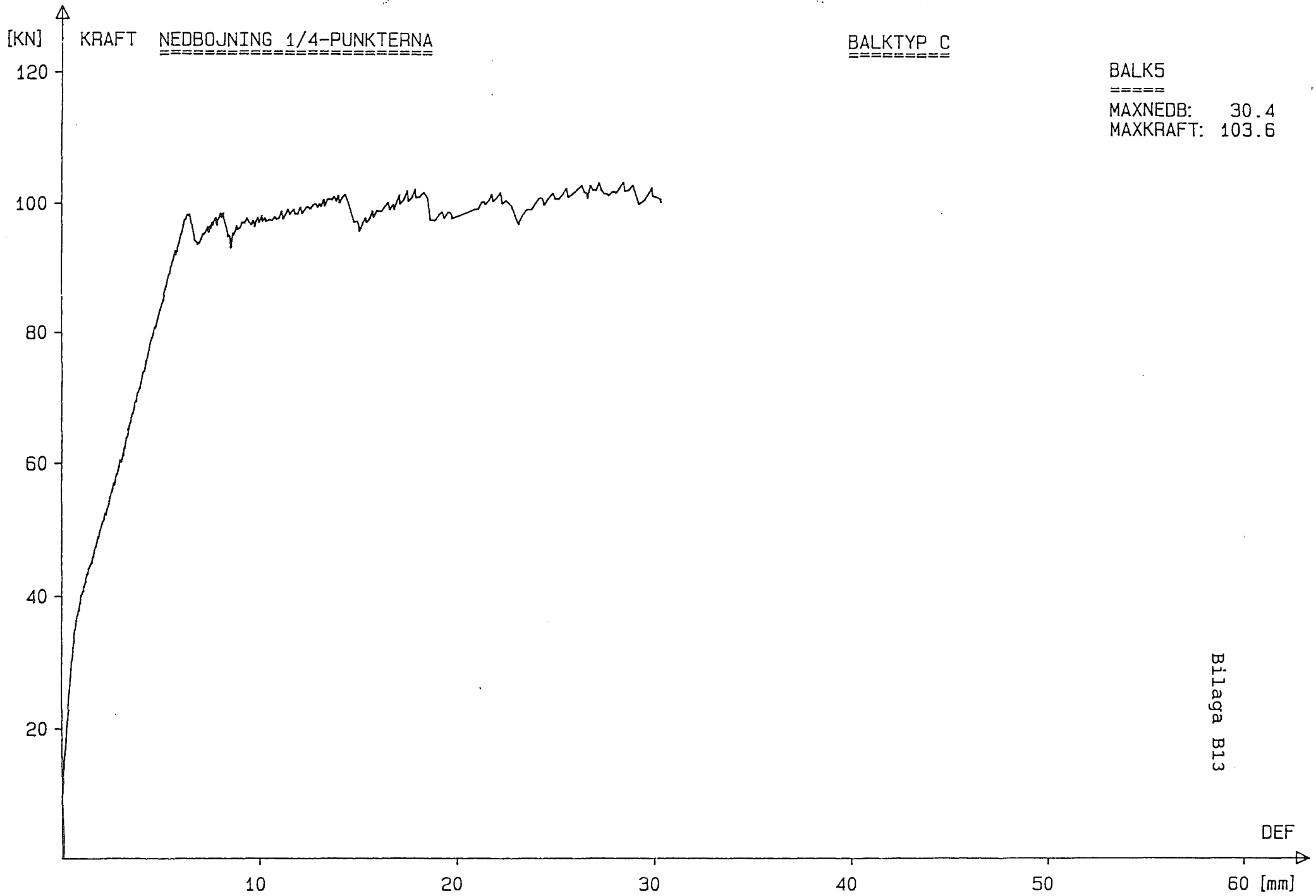


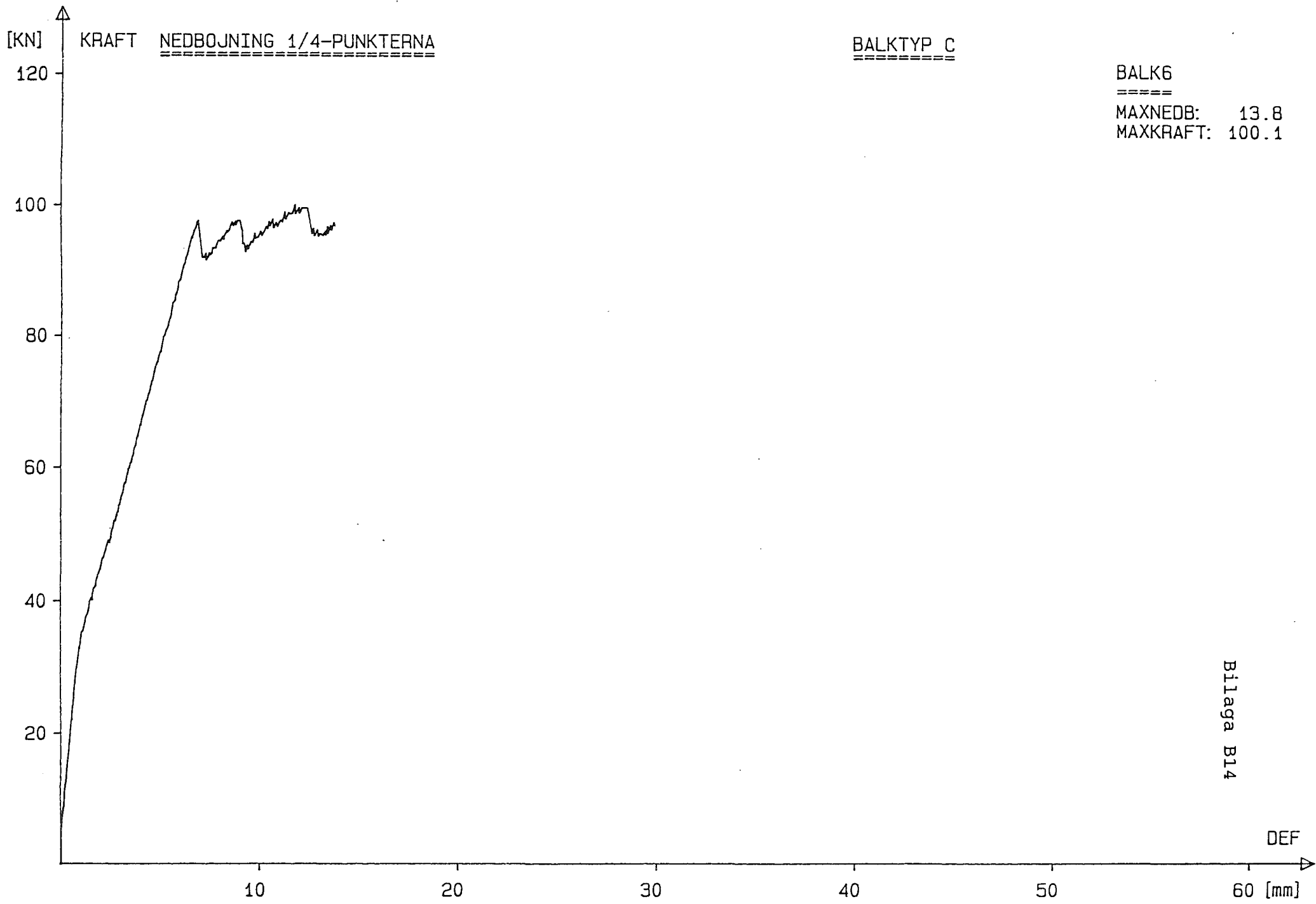












[KN] KRAFT NEDBOJNING 1/4-PUNKTERNA

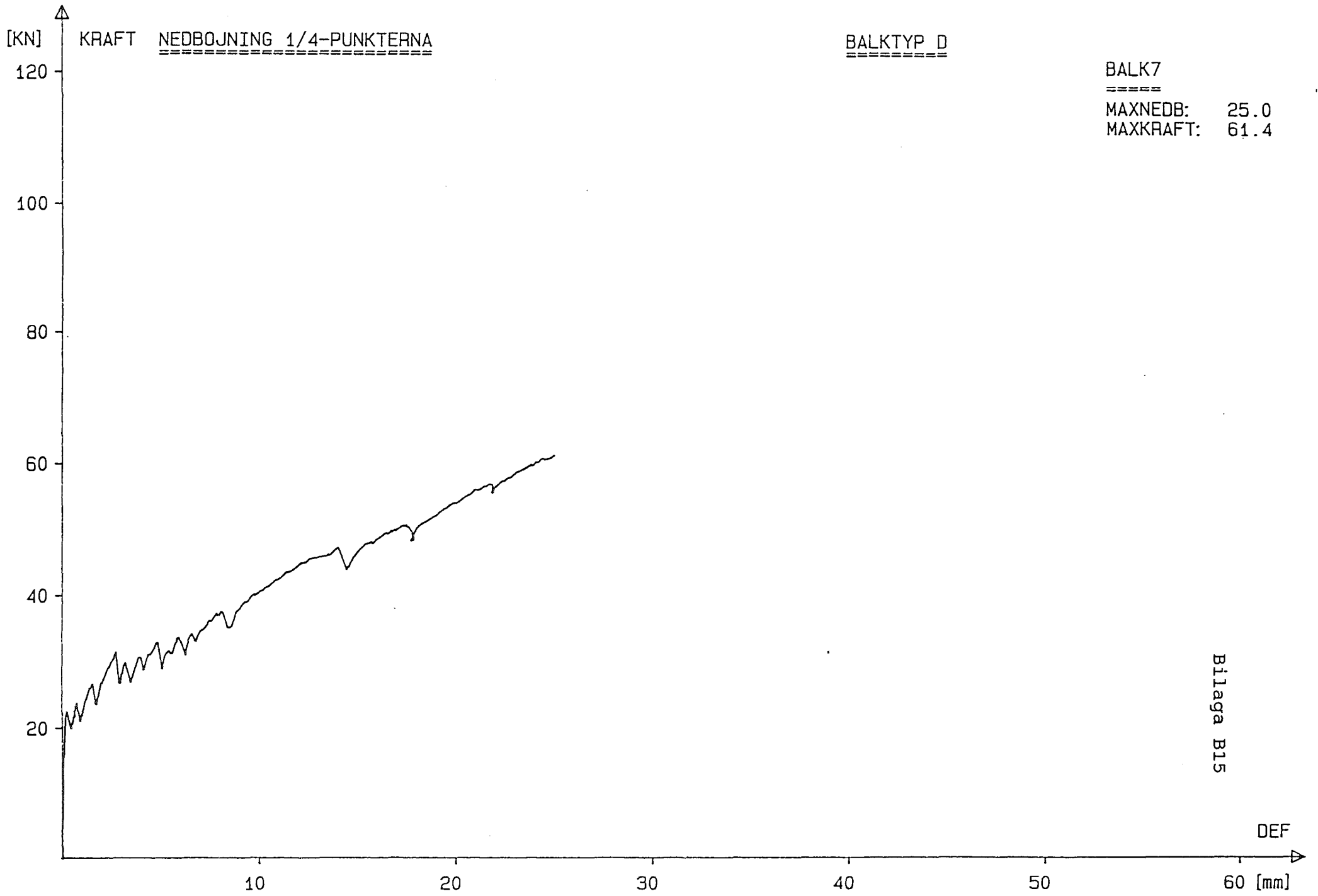
BALKTYP C

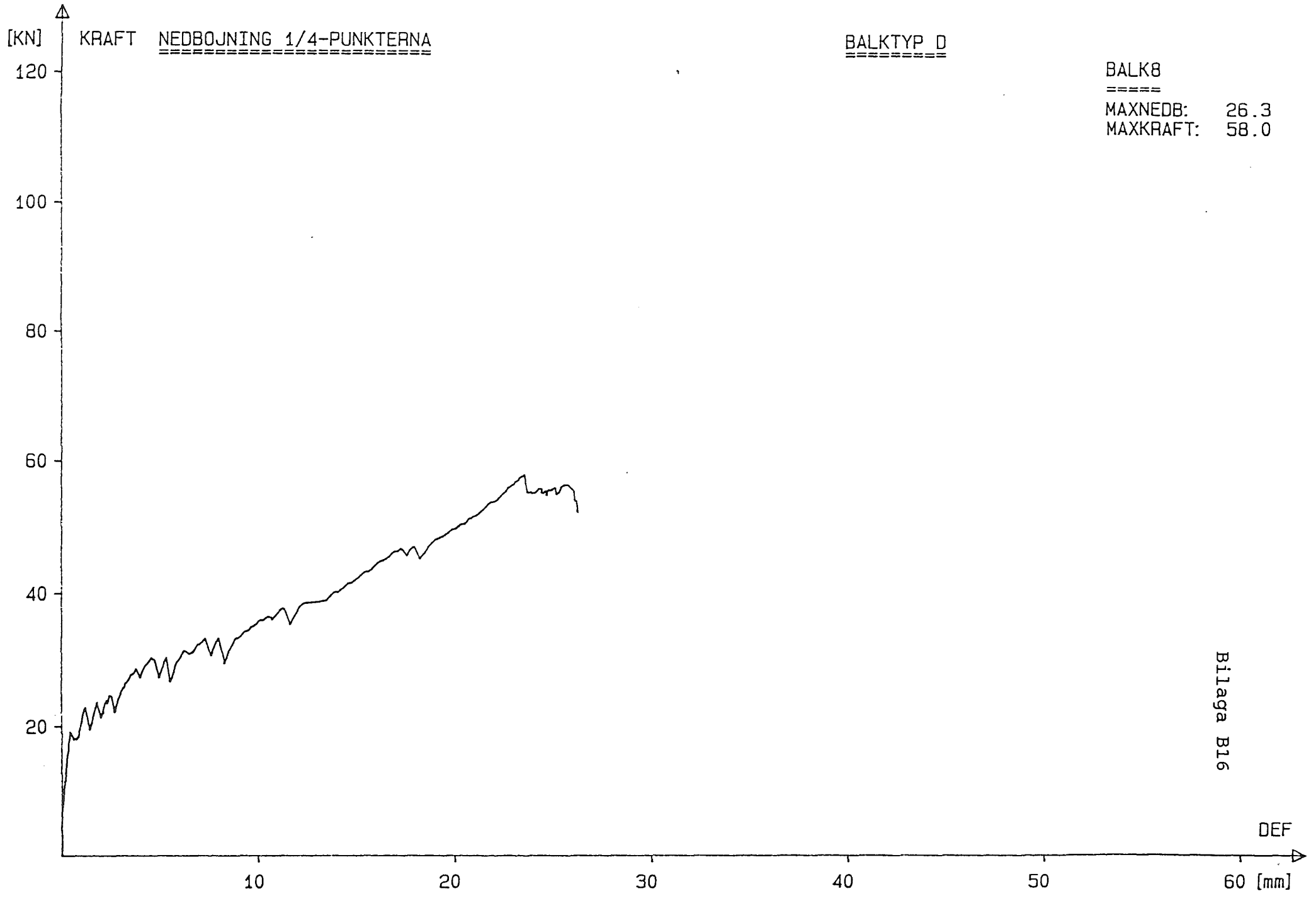
BALK6  
MAXNEDB: 13.8  
MAXKRAFT: 100.1

Bilag 14

DEF

10 20 30 40 50 60 [mm]





Bilaga B16

TOJNING

[KN] KRAFT

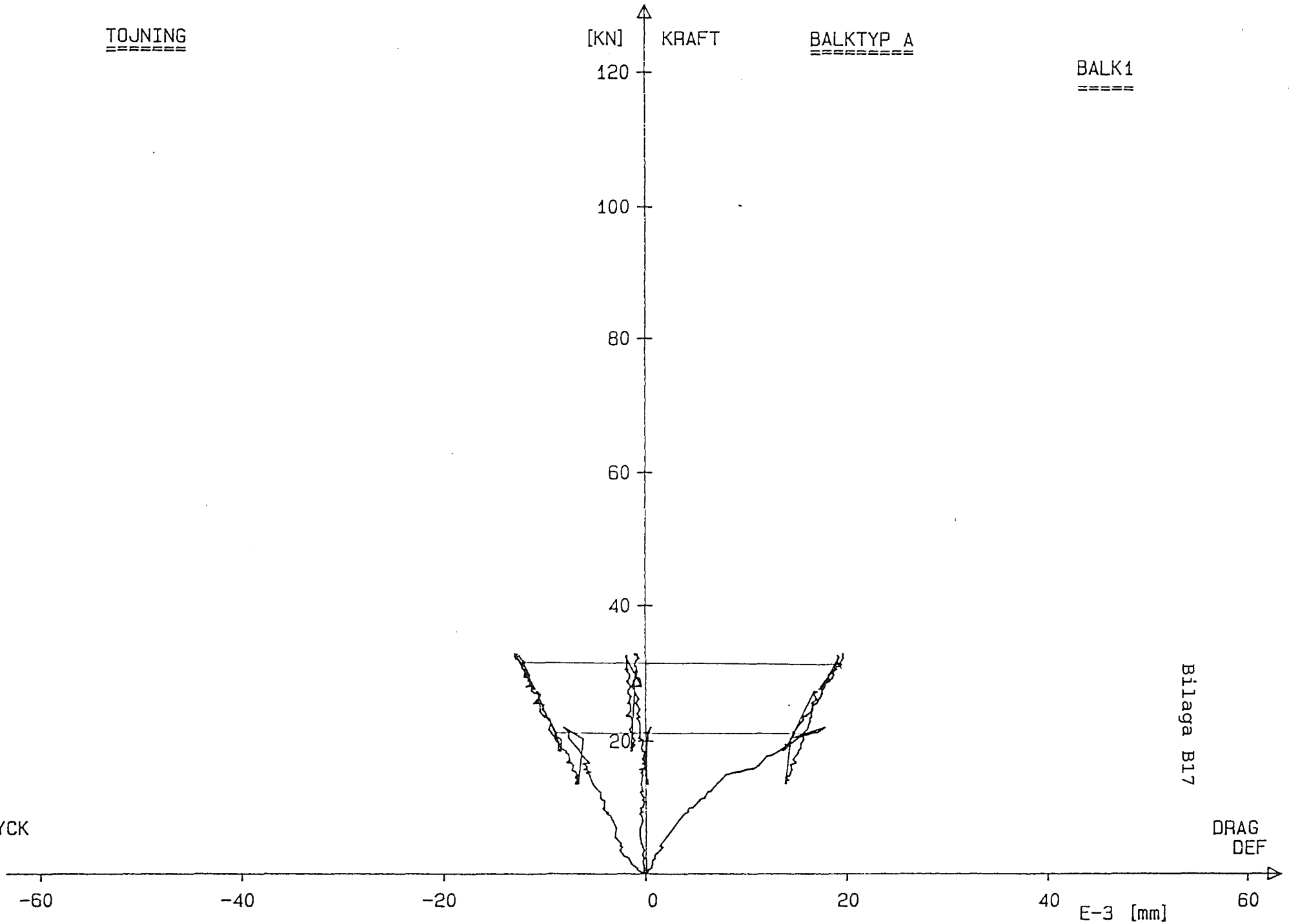
BALKTYP A

BALK1

TRYCK

DRAG  
DEF

Bilaga B17



TOJNING

[KN] KRAFT

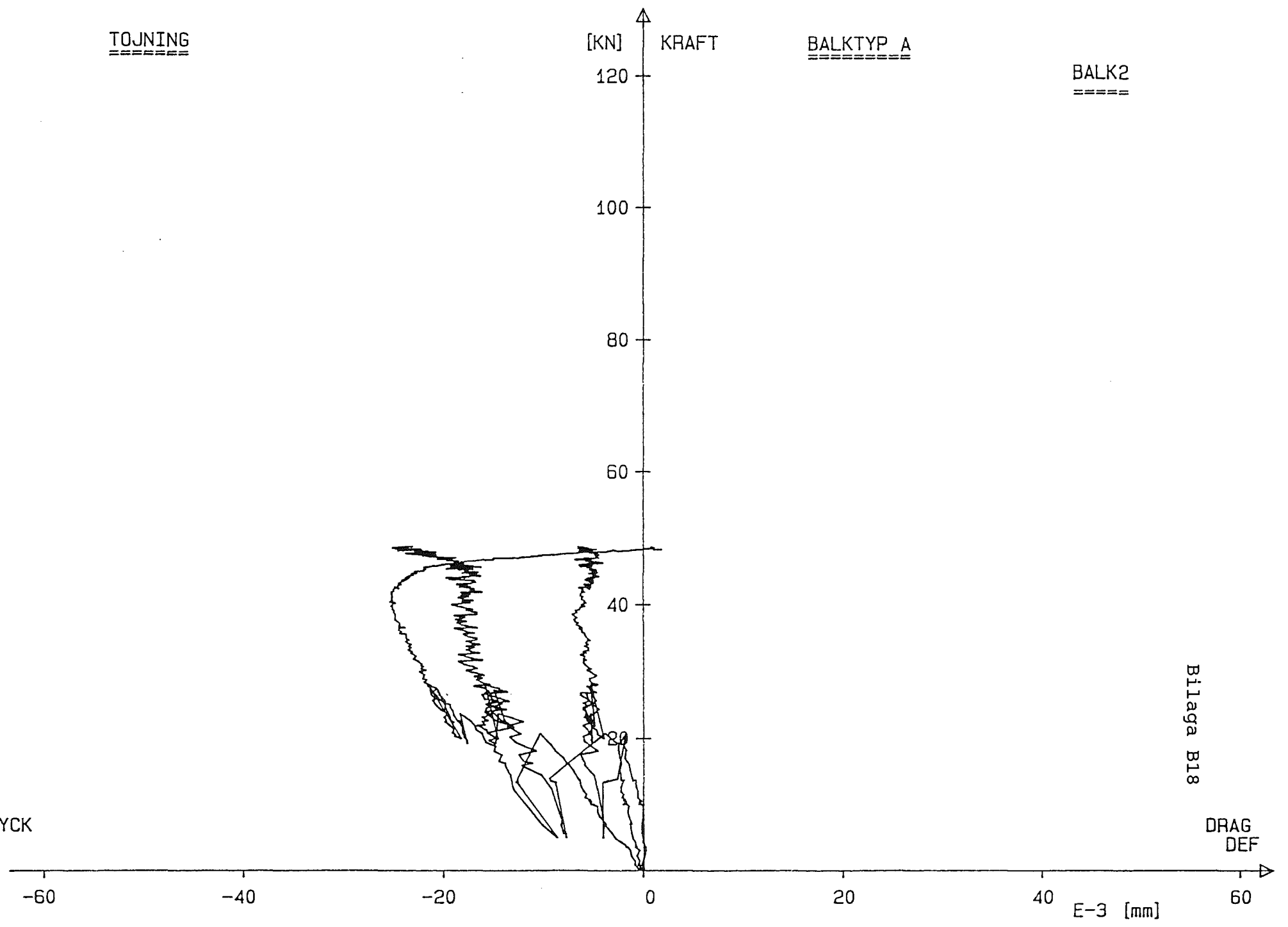
BALKTYP\_A

BALK2

TRYCK

Bilaga B18

DRAG  
DEF



TOJNING

[KN] KRAFT

BALKTYP B

BALK3

120

100

80

60

40

20

TRYCK

Bilaga B19

DRAG  
DEF

-60

-40

-20

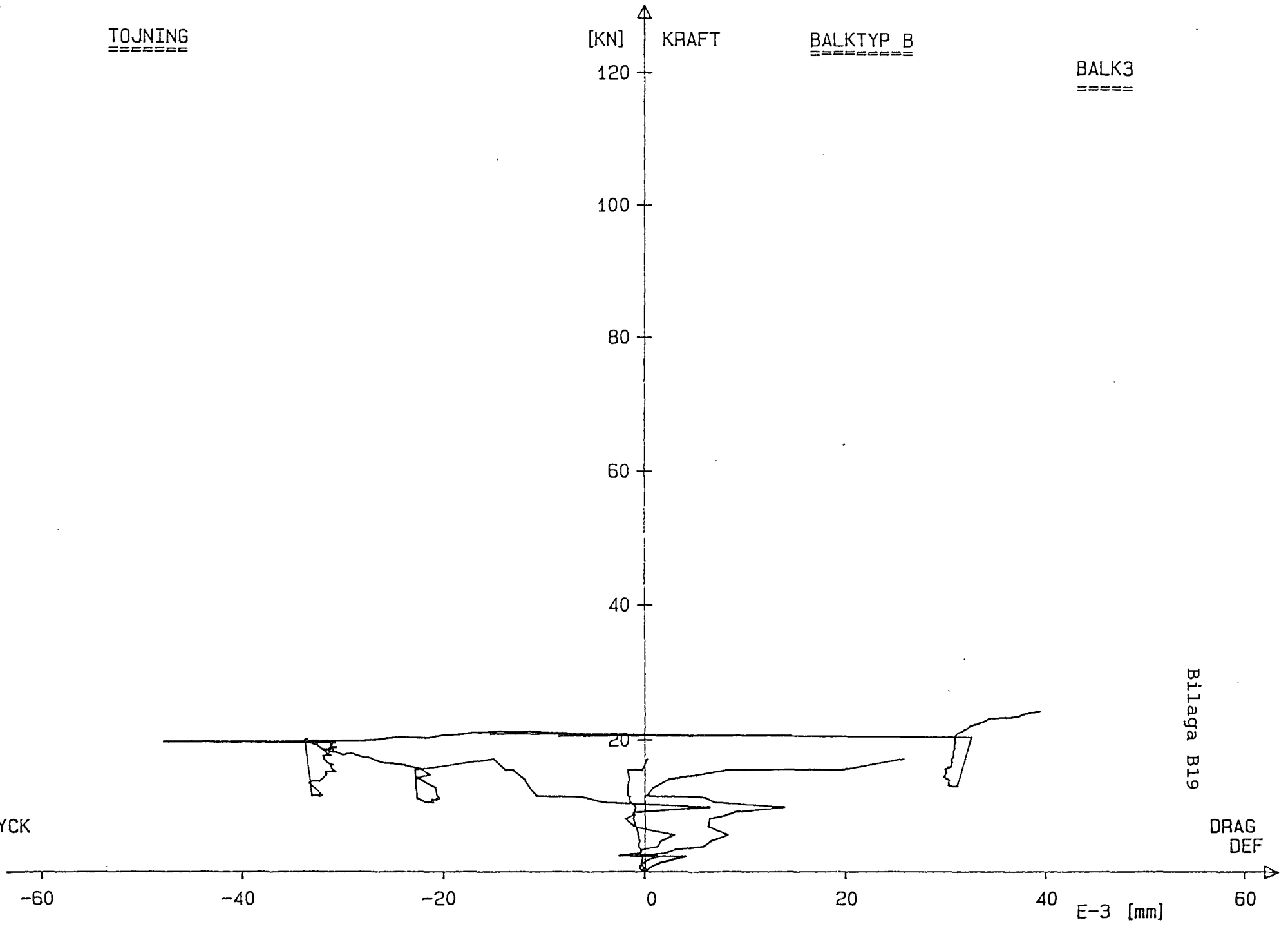
0

20

40

E-3 [mm]

60





TOJNING

[KN] KRAFT

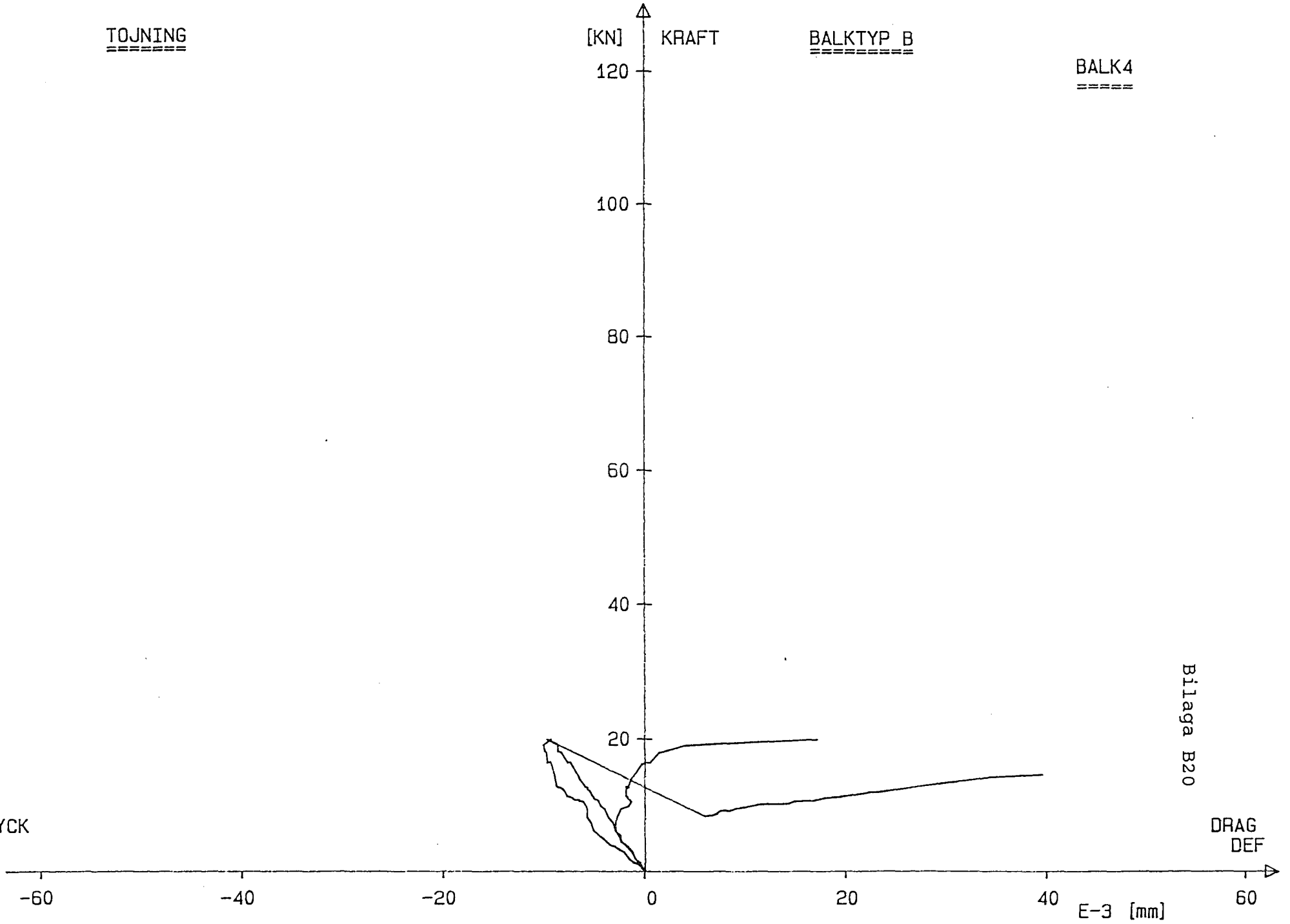
BALKTYP B

BALK4

TRYCK

Bilaga B20

DRAG DEF



TOJNING

[KN] KRAFT

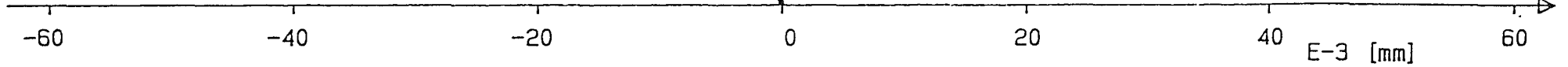
BALKTYP C

BALK5

TRYCK

Bilaga B21

DRAG  
DEF



TOJNING

[KN] KRAFT

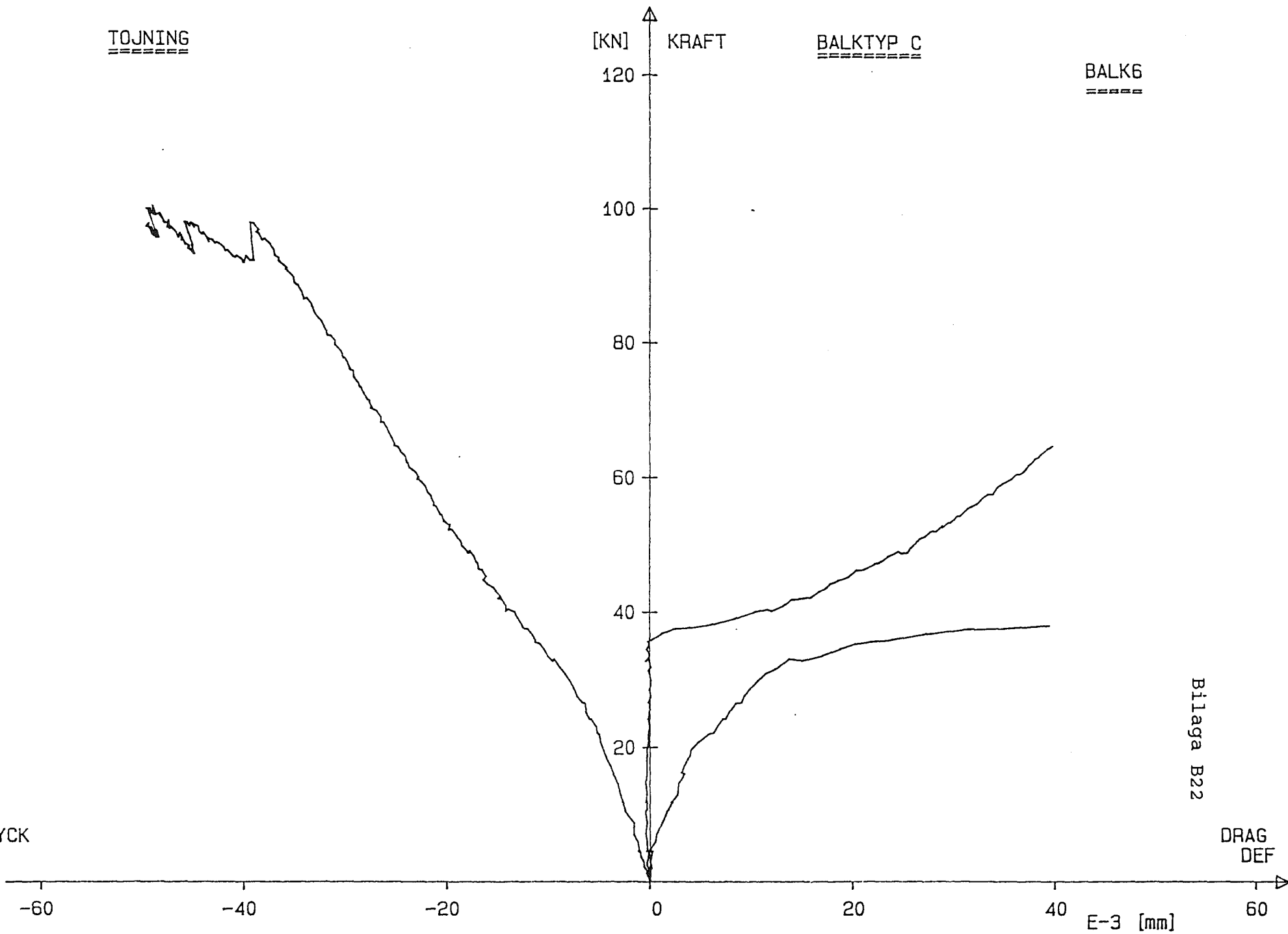
BALKTYP C

BALK6

TRYCK

DRAG DEF

Bilaga B22

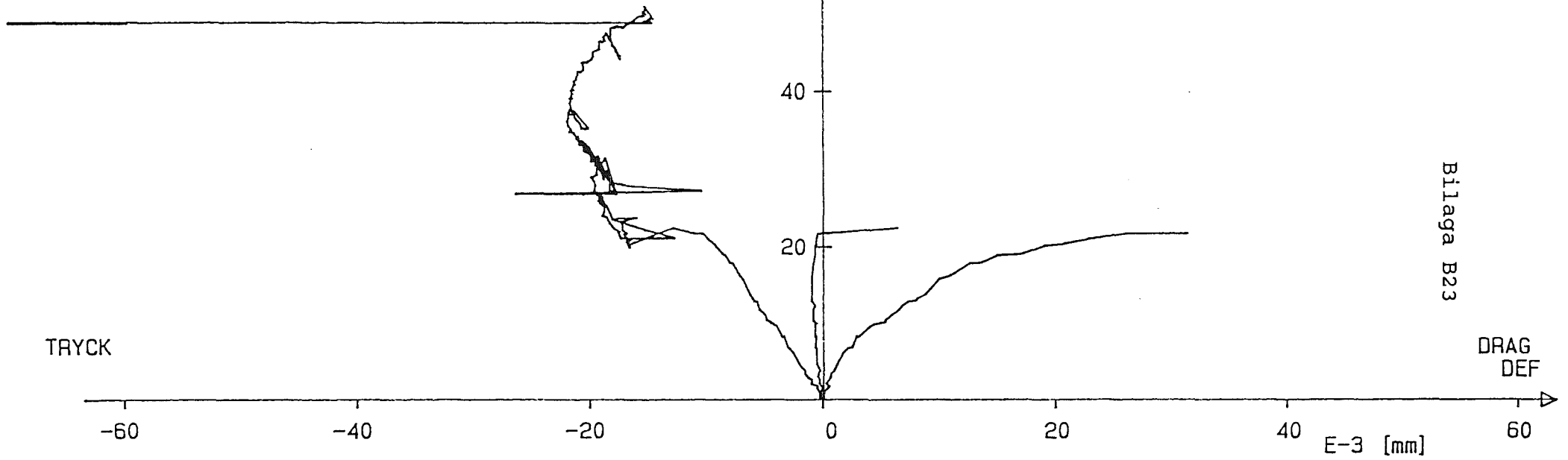


TOJNING

[KN] KRAFT

BALKTYP D

BALK7



TOJNING

[KN] KRAFT  
120  
100  
80  
60  
40  
20

BALKTYP D

BALK8

TRYCK

Bilagga B24

DRAG  
DEF

-60

-40

-20

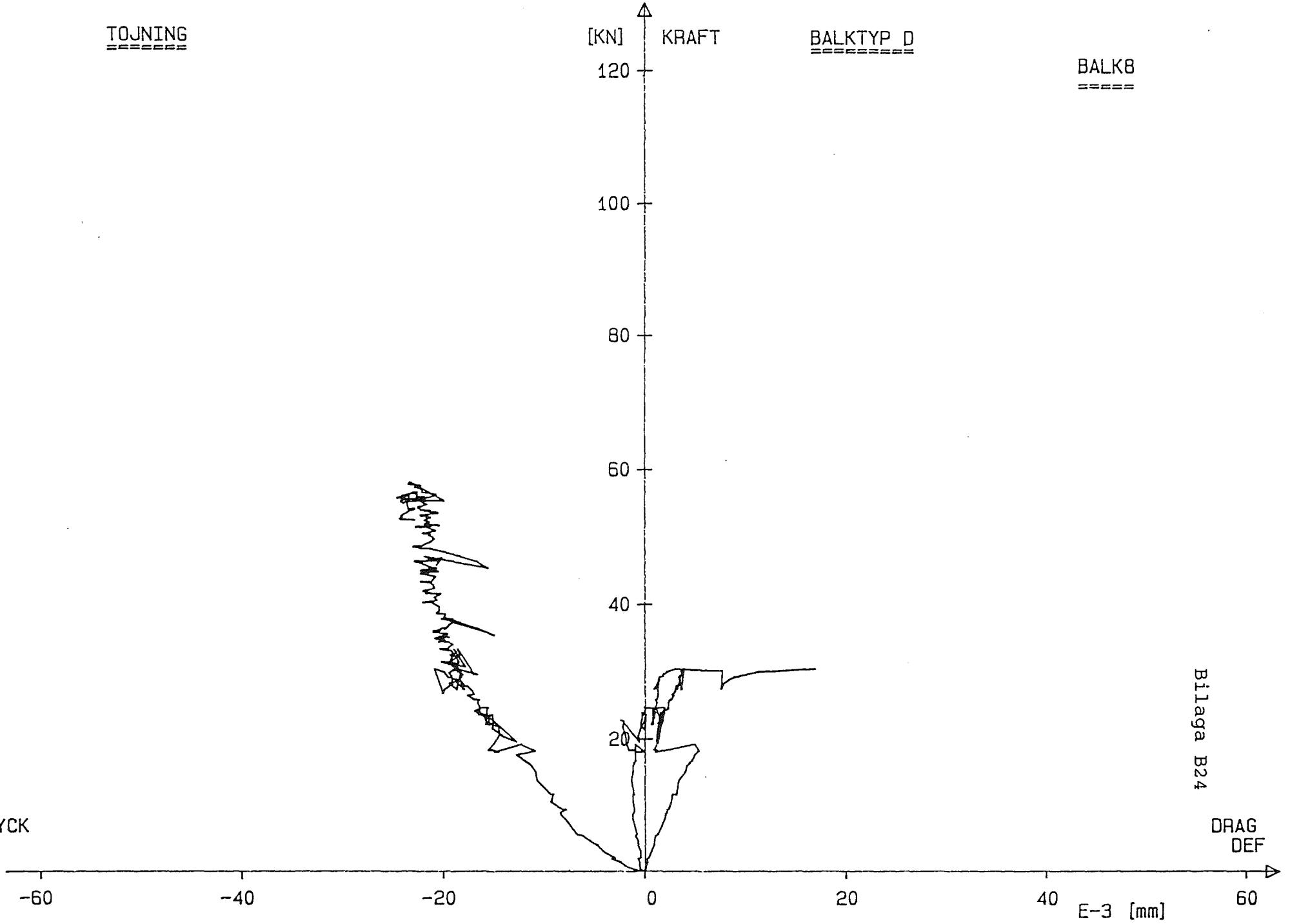
0

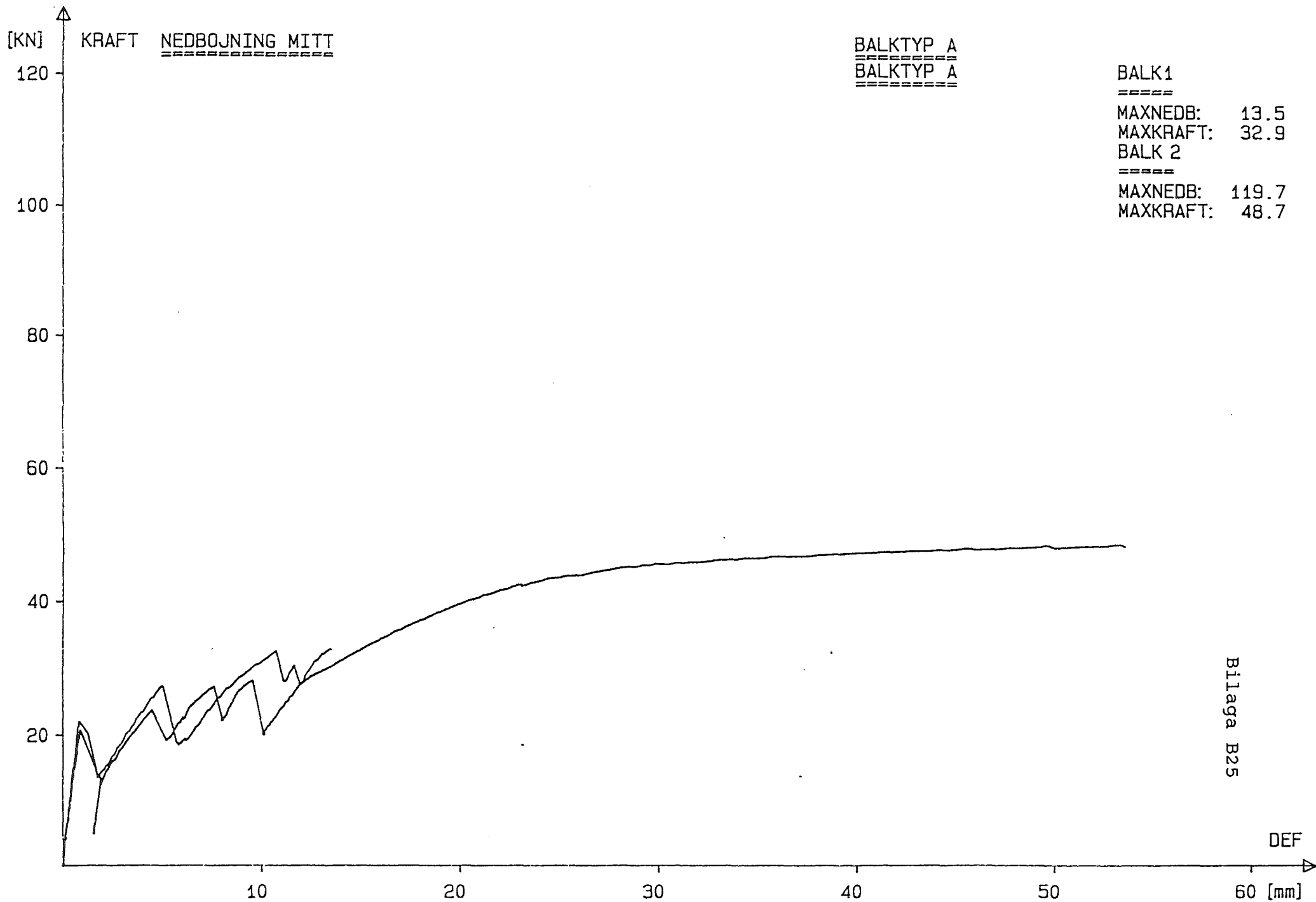
20

40

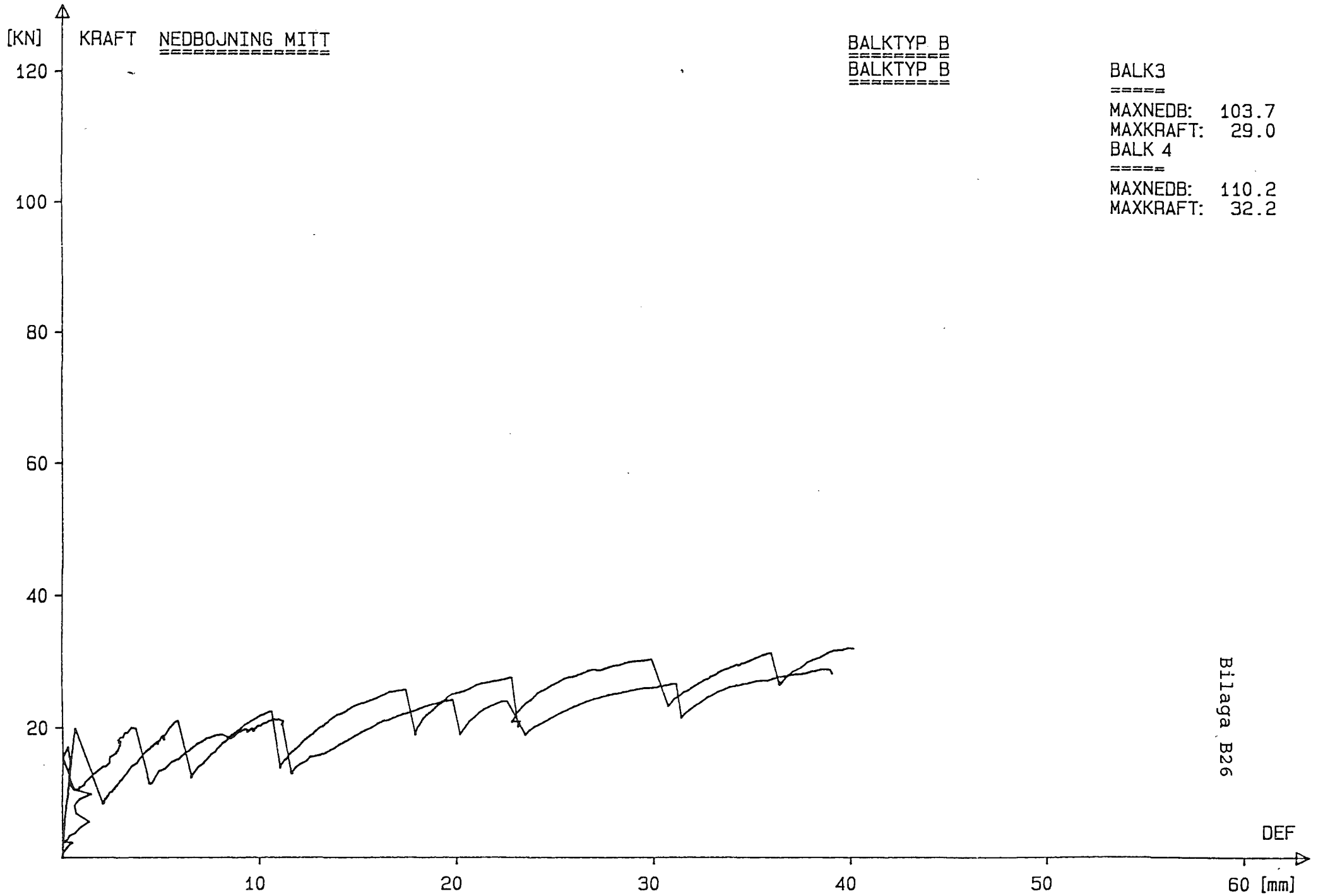
E-3 [mm]

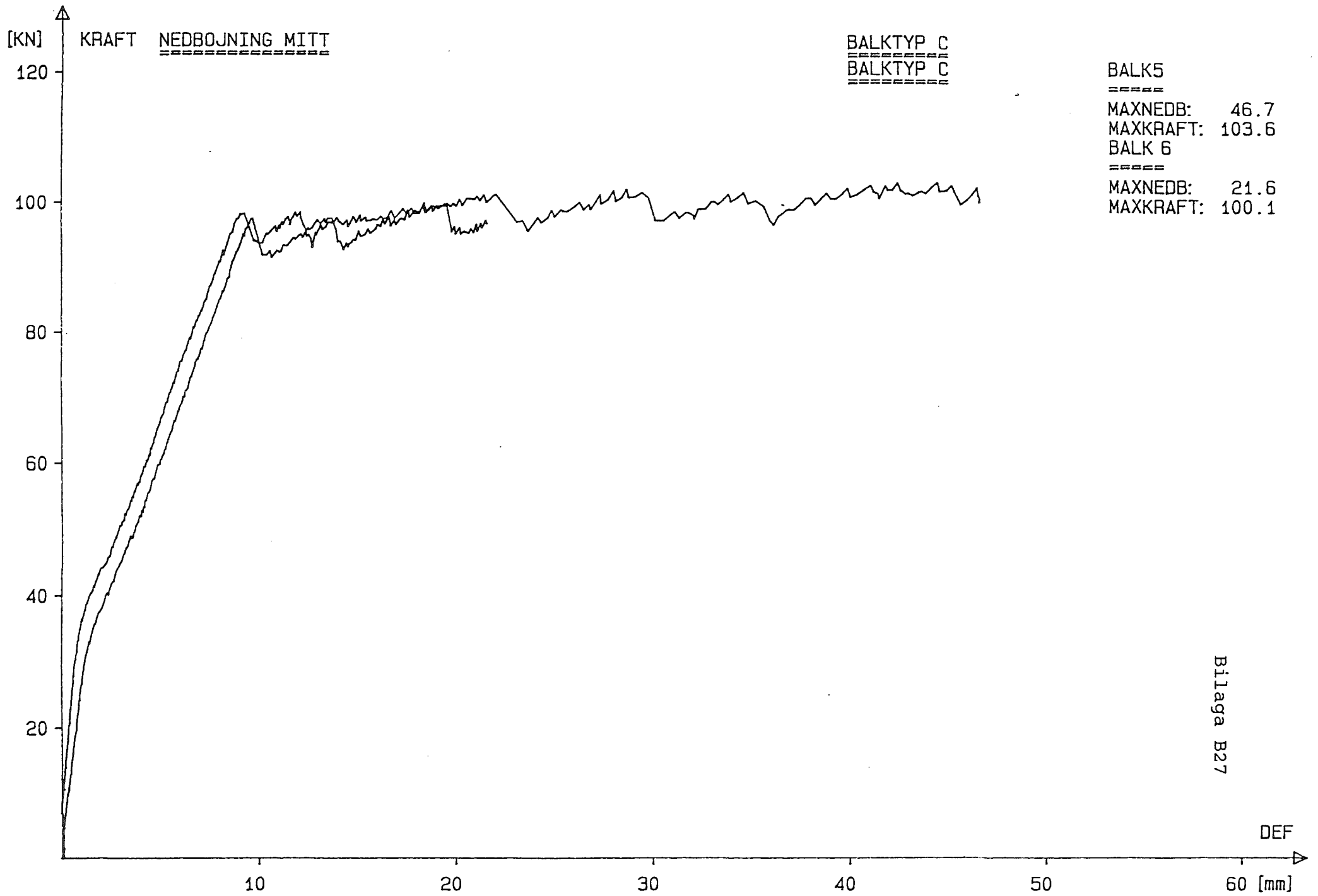
60





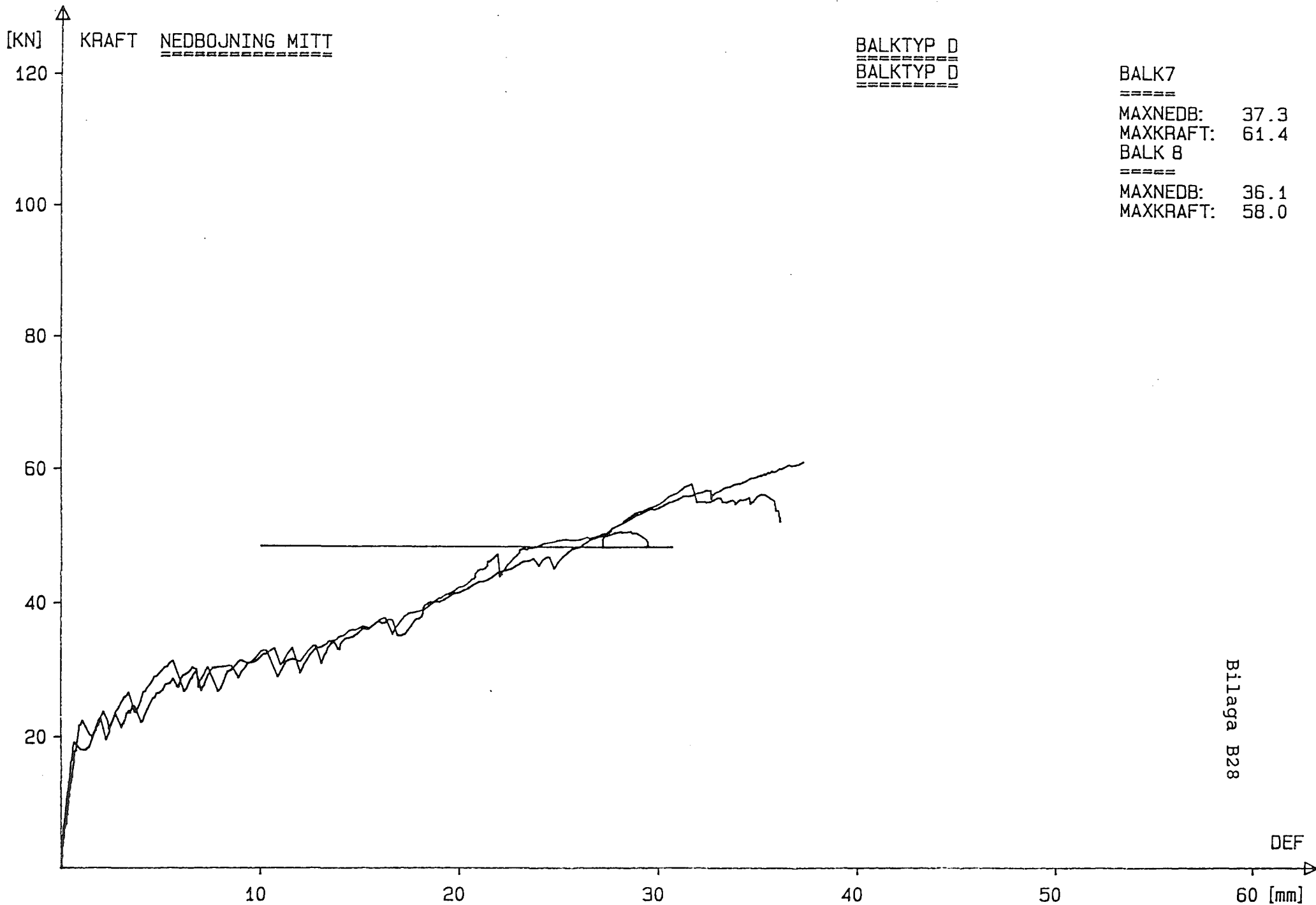
Bilaga B25

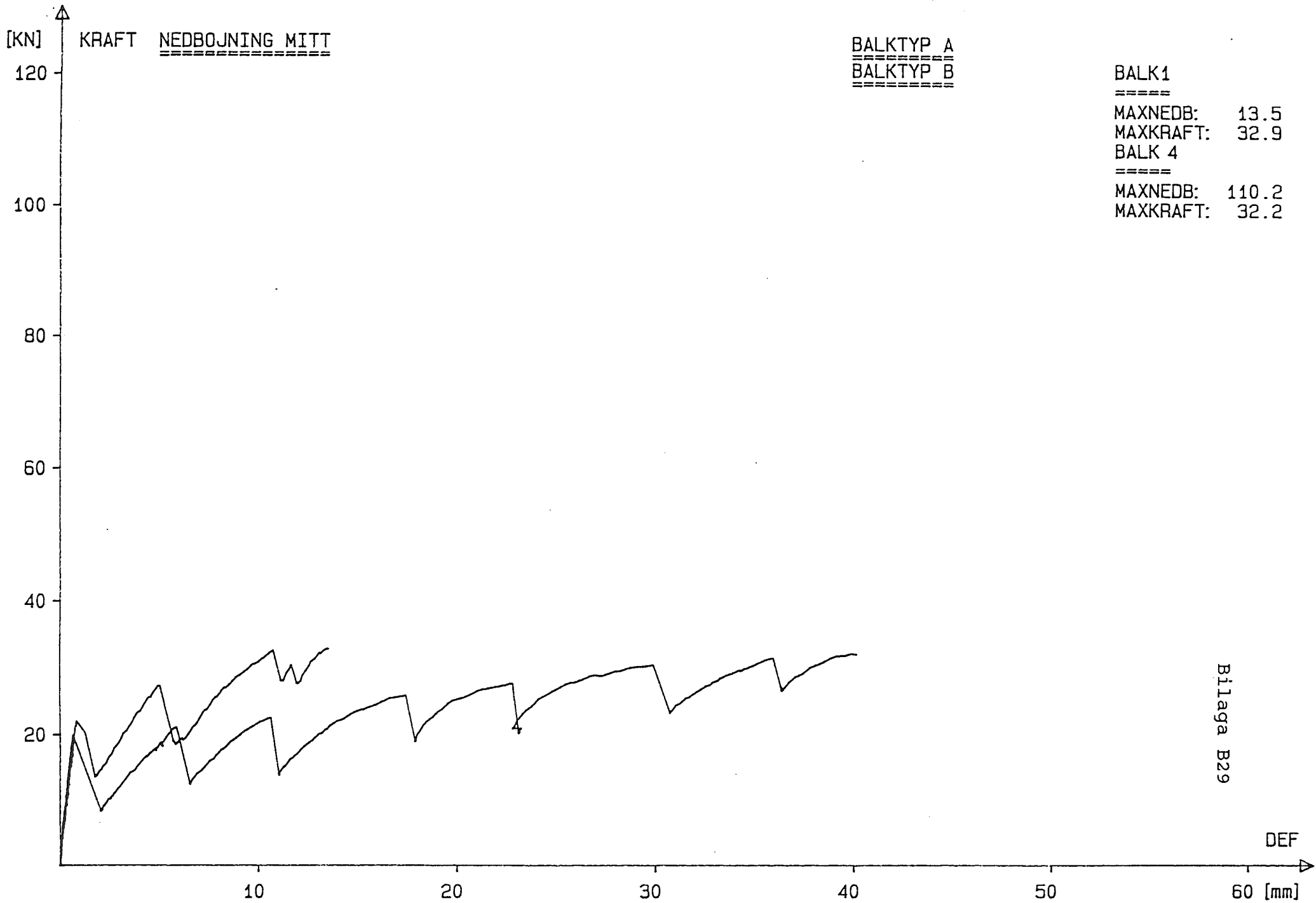


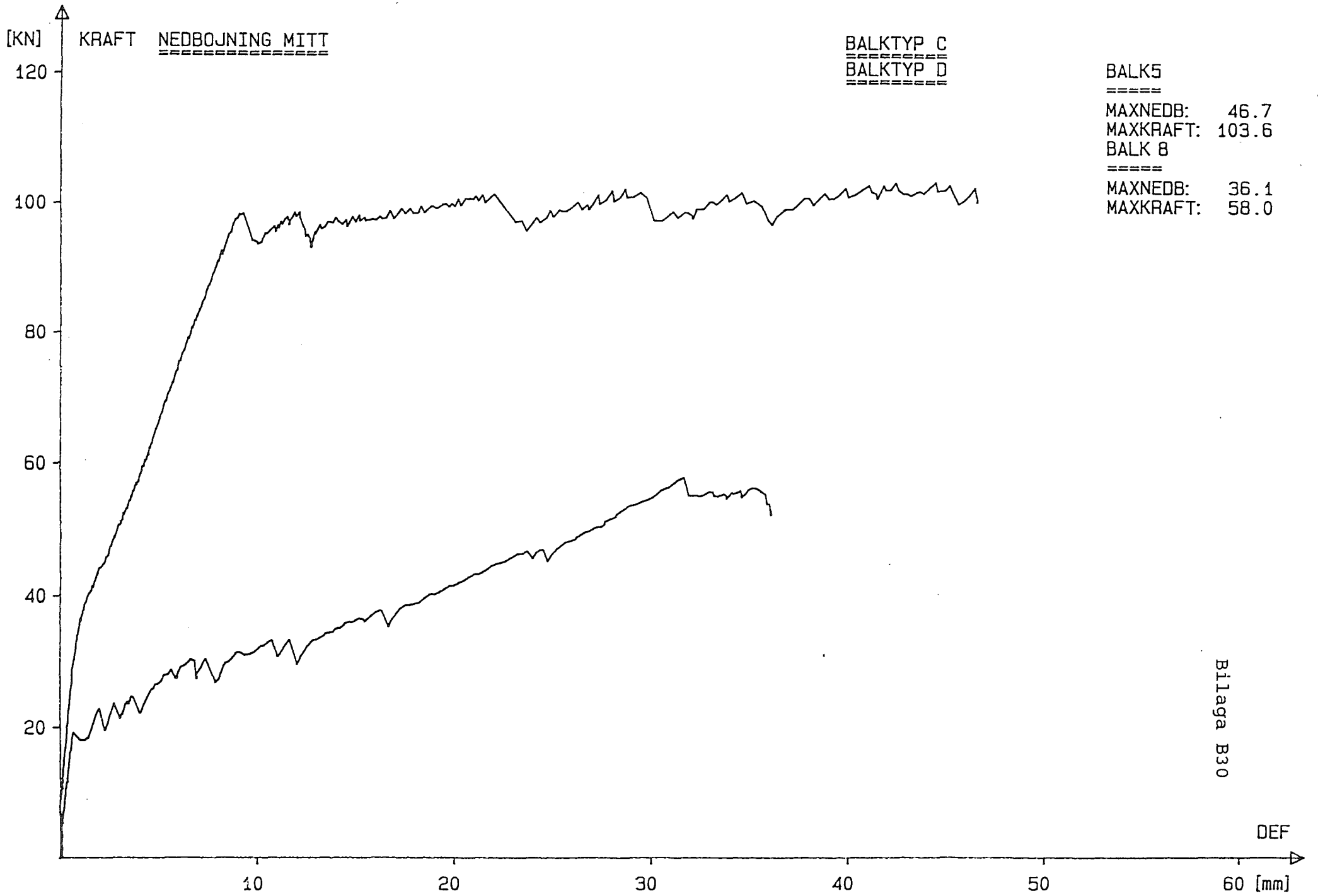


Bilaga B27









\*\*\* EXJOBBS FILHANTERING (EXJFIL) \*\*\*

```

INTEGER A,B,C(1:2),E,I,J(1:2),L,IK,XMAX,YMAX,F,G
DOUBLE PRECISION VARDE, LAST(1:500,1:2), NEDMITT(1:500,1:2)
DOUBLE PRECISION MEDNED(1:500,1:2), TOJ(1:500,1:3), XZ
DOUBLE PRECISION LAST2(1:500,1:2), TOJ2(1:500,1:3)
INTEGER*2 GRACOM
INTEGER*4 SIZE, INTARY(5000)
COMMON /GRACOM/SIZE, INTARY
SIZE=5000

WRITE(*,*) 'VILKET ÖNSKAS <1-3>'
WRITE(*,*)
WRITE(*,*) '1.NEDBÖJNING I MITT'
WRITE(*,*) '2.MEDELNEDBÖJNINGEN I 1/4-PUNKTERNA'
WRITE(*,*) '3.TÖJNINGEN'
WRITE(*,*)
READ(*,*) A
WRITE(*,*) 'VILKET ÖNSKAS <1-2>'
WRITE(*,*)
WRITE(*,*) '1.SINGEL'
WRITE(*,*) '2.KOMBINATION'
WRITE(*,*)
READ(*,*) B
WRITE(*,*) 'VILKEN ALT. VILKA BALKAR <1-8>'
WRITE(*,*)
DO 15 I=1,B
  READ(*,*) C(I)
  C(I)=C(I)*10
15 CONTINUE
J(1)=0
J(2)=0
XZ=0
DO 500 E=1,B
  I=0
  L=0
IF(C(E).EQ.10) OPEN (UNIT=10,FILE='C:BALK1',STATUS='OLD',IOSTA
IF(C(E).EQ.20) OPEN (UNIT=20,FILE='C:BALK2',STATUS='OLD',IOSTA
IF(C(E).EQ.30) OPEN (UNIT=30,FILE='C:BALK3',STATUS='OLD',IOSTA
IF(C(E).EQ.40) OPEN (UNIT=40,FILE='C:BALK4',STATUS='OLD',IOSTA
IF(C(E).EQ.50) OPEN (UNIT=50,FILE='C:BALK5',STATUS='OLD',IOSTA
IF(C(E).EQ.60) OPEN (UNIT=60,FILE='C:BALK6',STATUS='OLD',IOSTA
IF(C(E).EQ.70) OPEN (UNIT=70,FILE='C:BALK7',STATUS='OLD',IOSTA
IF(C(E).EQ.80) OPEN (UNIT=80,FILE='C:BALK8',STATUS='OLD',IOSTA

```

```

10  READ (C(E),*,END=500,IOSTAT=K) VARDE
    I=I+1
    IF (I.EQ.2) THEN
        J(E)=J(E)+1
        LAST(J(E),E)=ABS(VARDE)
    ENDIF
    IF (A.EQ.1) THEN
        IF (I.EQ.3) THEN
            L=L+1
            NEDMITT(L,E)=ABS(VARDE)
        ENDIF
    ENDIF
    IF (A.EQ.2) THEN
        IF (I.EQ.4) THEN
            L=L+1
            MEDNED(L,E)=ABS(VARDE)
        ENDIF
        IF (I.EQ.5) THEN
            MEDNED(L,E)=(MEDNED(L,E)+ABS(VARDE))/2
        ENDIF
    ENDIF
    IF (A.EQ.3) THEN
        IF (I.EQ.8) THEN
            L=L+1
            TOJ(L,1)=VARDE
        ENDIF
        IF (I.EQ.9) THEN
            TOJ(L,2)=VARDE
        ENDIF
        IF (I.EQ.10) THEN
            TOJ(L,3)=VARDE
        ENDIF
    ENDIF
    IF (I.EQ.10) THEN
        I=0
    ENDIF
    GOTO 10
500 CONTINUE
    DO 30 I=1,B
        C(I)=C(I)/10
30  CONTINUE
20  I=1
60  IF (I.EQ.1) THEN
        IF (B.EQ.1) THEN
            WRITE(*,*) 'SÅ MÅNGA VÄRDEN FINNS MED',J(1)
            WRITE(*,*) 'HUR MÅNGA VÄRDEN VILL DU HA MED'
            WRITE(*,*)
            READ(*,*) J(1)
        ENDIF

```

```
F=0
XY=-1E6
IF (A.EQ.3) THEN
  DO 25 G=1,J(1)
    IF (LAST(G,1).GT.XY) THEN
      F=F+1
      LAST2(F,1)=LAST(G,1)
      TOJ2(F,1)=TOJ(G,1)
      TOJ2(F,2)=TOJ(G,2)
      TOJ2(F,3)=TOJ(G,3)
      XY=LAST(G,1)
    ENDIF
25  CONTINUE
ENDIF
IF (B.EQ.2) THEN
  WRITE(*,*) 'SÅ MÅNGA VÄRDEN FINNS MED'
  WRITE(*,*) 'BALK',C(1),' ',J(1)
  WRITE(*,*) 'BALK',C(2),' ',J(2)
  WRITE(*,*) 'HUR MÅNGA VÄRDEN VILL DU HA'
  WRITE(*,*) 'BALK',C(1),' '
  READ(*,*) J(1)
  WRITE(*,*) 'BALK',C(2),' '
  READ(*,*) J(2)
ENDIF
WRITE(*,*) 'ANGE XMAX PÅ X-AXELN [mm] (60)'
READ(*,*) XMAX
WRITE(*,*) 'ANGE YMAX PÅ Y-AXELN [KN] (120)'
READ(*,*) YMAX
IF (A.EQ.1) THEN
  CALL RITA(LAST,NEDMITT,J,A,B,C,XMAX,YMAX)
ENDIF
IF (A.EQ.2) THEN
  CALL RITA(LAST,MEDNED,J,A,B,C,XMAX,YMAX)
ENDIF
IF (A.EQ.3) THEN
  CALL RITA(LAST2,TOJ2,F,A,B,C,XMAX,YMAX)
ENDIF
WRITE(*,*) 'OM DU VILL KÖRA OM SKRIV 1 ANNARS 2'
WRITE(*,*)
READ(*,*) I
GOTO 60
ENDIF
STOP
END
END
```

```
SUBROUTINE RITA(LAST,NED,J,A,B,C,XMAX,YMAX)
DOUBLE PRECISION LAST(1:500,1:2),NED(1:500,1:3),C1(1:2),D1(1:2)
INTEGER J(1:2),I,A,B,XMAX,YMAX,C(1:2)

WRITE(*,*) 'OM DU VILL HA RESULTATET PÅ PLOTTER SKRIV 1'
READ(*,*) I
IF (I.EQ.1) THEN
  CALL GINKS(1,'PLOTTER',1,VERNUM)
ELSE
  CALL GINKS(1,'DISPLAY',1,VERNUM)
ENDIF
OPEN (UNIT=14,FILE='ERRORS',STATUS='UNKNOWN')
CALL GOPKS(14,SIZE)
CALL GOPWK(1,0,1)
CALL GACWK(1)
CALL GSWN(1,0.0,200.0,0.0,140.0)
CALL GSV(1,0.0,1.0,0.0,0.7)
CALL GSWKWN(1,0.0,1.0,0.0,0.7)
CALL GQMS(1,IERR,0,XDC,YDC,IPX,IPY)
CALL GSWKVP(1,0.0,XDC,0.0,YDC)
CALL GSELNT(1)

IF (A.EQ.3) THEN
  CALL DIAGR2(XMAX,YMAX)
ELSE
  CALL DIAGR(XMAX,YMAX)
ENDIF
CALL RES(LAST,NED,J,A,B,XMAX,YMAX,C1,D1)
CALL TEXT(A,B,C,C1,D1)

CALL GDAWK(1)
CALL GCLWK(1)
CALL GCLKS()
CLOSE(UNIT=14)
RETURN
END
END
```

```

SUBROUTINE RES(LAST,NED,J,A,B,XMAX,YMAX,C1,D1)
DOUBLE PRECISION LAST(1:500,1:2),NED(1:500,1:3),C1(1:2),D1(1:2)
REAL*4 X(2),Y(2)
INTEGER A,B,I,J(1:2),K,L,XMAX,YMAX
CHARACTER*9 E,F

CALL GSPLCI(1)

IF (A.EQ.3) THEN
  DO 30 K=1,3
    DO 20 I=1,(J(1)-1)
      IF ((LAST(I+1,1).GT.YMAX).OR.(NED(I+1,K).GT.XMAX)) THEN
        GOTO 30
      ENDIF
      G=LAST(I,1)
      X(1)=(NED(I,K)*(90/XMAX)+105)
      Y(1)=(LAST(I,1)*(120/YMAX)+10)
      X(2)=(NED(I+1,K)*(90/XMAX)+105)
      Y(2)=(LAST(I+1,1)*(120/YMAX)+10)
      DO 10 L=1,2
        CALL GPL(2,X,Y)
10      CONTINUE
20      CONTINUE
30      CONTINUE
    ELSE
      DO 80 K=1,B
        DO 50 I=1,(J(K)-1)
          IF ((LAST(I+1,K).GT.YMAX).OR.(NED(I+1,K).GT.XMAX)) THEN
            GOTO 60
          ENDIF
          X(1)=(NED(I,K)*(180/XMAX)+10)
          Y(1)=(LAST(I,K)*(120/YMAX)+10)
          X(2)=(NED(I+1,K)*(180/XMAX)+10)
          Y(2)=(LAST(I+1,K)*(120/YMAX)+10)
          DO 40 L=1,2
            CALL GPL(2,X,Y)
40          CONTINUE
50          CONTINUE
60          C1(K)=-1E5
            D1(K)=-1E5
            DO 70 I=1,J(K)
              IF (C1(K).LT.NED(I,K)) THEN
                C1(K)=NED(I,K)
              ENDIF
              IF (D1(K).LT.LAST(I,K)) THEN
                D1(K)=LAST(I,K)
              ENDIF
70          CONTINUE
80          CONTINUE
        ENDIF
      RETURN
    END
  END

```



```
SUBROUTINE DIAGR(XMAX,YMAX)
REAL*4 X1(2),X2(2),Y1(2),Y2(2),X3(3),Y3(3),X4(3),Y4(3),X,Y
REAL N
INTEGER Z,B,XMAX,YMAX
CHARACTER*5 A

DATA X1/10.,200./
DATA X2/10.,10./
DATA Y1/10.,10./
DATA Y2/10.,140./
DATA X3/200.,198.,198./
DATA Y3/10.,11.,9./
DATA X4/10.,11.,9./
DATA Y4/140.,138.,138/

CALL GSCHH(2.)
CALL GSPLCI(2)
DO 10 I=1,2
  CALL GPL(2,X1,Y1)
10 CONTINUE
DO 20 I=1,2
  CALL GPL(2,X2,Y2)
20 CONTINUE
CALL GFA(3,X3,Y3)
CALL GFA(3,X4,Y4)
DO 30 I=1,6
  X1(1)=30*I+10
  X1(2)=X1(1)
  Y1(1)=10
  Y1(2)=9
  CALL GPL(2,X1,Y1)
30 CONTINUE
DO 40 I=1,6
  N=(REAL(XMAX)/6)*REAL(I)
  X=30*I+6
  Y=5
  Z=ABS((XMAX/6)*I)
  WRITE(A,200) Z
  CALL GTX(X,Y,A)
40 CONTINUE
DO 50 I=1,6
  X1(1)=10
  X1(2)=9
  Y1(1)=20*I+10
  Y1(2)=Y1(1)
  CALL GPL(2,X1,Y1)
50 CONTINUE
DO 60 I=1,6
  Z=ABS((YMAX/6)*I)
  X=3
  Y=20*I+9
  WRITE(A,200) Z
  CALL GTX(X,Y,A)
60 CONTINUE
200 FORMAT(I3)
RETURN
END
END
```

```
SUBROUTINE DIAGR2(XMAX,YMAX)
REAL*4 X1(2),X2(2),Y1(2),Y2(2),X3(3),Y3(3),X4(3),Y4(3),X,Y
INTEGER I,Z,XMAX,YMAX
CHARACTER*3 A

DATA X1/10.,200./
DATA X2/105.,105./
DATA Y1/10.,10./
DATA Y2/10.,140./
DATA X3/200.,198.,198./
DATA Y3/10.,11.,9./
DATA X4/105.,104.,106./
DATA Y4/140.,138.,138./

CALL GSCHH(2.)
CALL GSPLCI(2)
DO 10 I=1,2
  CALL GPL(2,X1,Y1)
10 CONTINUE
DO 20 I=1,2
  CALL GPL(2,X2,Y2)
20 CONTINUE
CALL GFA(3,X3,Y3)
CALL GFA(3,X4,Y4)
DO 30 I=1,7
  X1(1)=30*I-15
  X1(2)=X1(1)
  Y1(1)=10
  Y1(2)=9
  CALL GPL(2,X1,Y1)
30 CONTINUE
DO 40 I=1,7
  Z=(XMAX/3)*(I-4)
  X=30*I-18
  Y=5
  WRITE(A,100) Z
  CALL GTX(X,Y,A)
40 CONTINUE
DO 50 I=1,6
  X1(1)=104
  X1(2)=106
  Y1(1)=20*I+10
  Y1(2)=Y1(1)
  CALL GPL(2,X1,Y1)
50 CONTINUE
DO 60 I=1,6
  Z=ABS((YMAX/6)*I)
  X=98
  Y=20*I+9
  WRITE(A,100) Z
  CALL GTX(X,Y,A)
60 CONTINUE
100 FORMAT(I3)
RETURN
END
END
```

```

SUBROUTINE TEXT(A,B,C,C1,D1)
INTEGER A,B,C(1:2),I
DOUBLE PRECISION C1(1:2),D1(1:2)
CHARACTER*5 G,H,L,M,N,E
CHARACTER*9 O,R,S,T,U,AB,AC,AD,AE,AF,AG
CHARACTER*24 P,Q

G=' [KN] '
H=' KRAFT '
L=' DEF. '
M=' [mm] '
N=' BALK '
O=' ===== '
R=' MAXNEDB: '
S=' MAXKRAFT: '
CALL GTX(193.,13.,L)
IF (A.LT.3) CALL GTX(192.,5.,M)
CALL GTX(170.,130.,N)
CALL GTX(170.,127.,O)
WRITE(E,100) C(1)
CALL GTX(177.,130.,E)
AB=' BALKTYP '
AD=' ===== '
DO 37 I=1,B
  IF (C(I).LT.3) AC='A'
  IF ((C(I).GT.2).AND.(C(I).LT.5)) AC='B'
  IF ((C(I).GT.4).AND.(C(I).LT.7)) AC='C'
  IF (C(I).GT.6) AC='D'
  CALL GTX(130.,134.,AB)
  CALL GTX(130.,132.,AD)
  IF ((I.EQ.2).AND.(C(1).NE.C(2))) THEN
    CALL GTX(130.,130.,AB)
    CALL GTX(144.,130.,AC)
    CALL GTX(130.,128.,AD)
  ELSE
    CALL GTX(144.,134.,AC)
  ENDIF
37 CONTINUE
IF (A.EQ.1) THEN
  P='NEDBOJNING MITT'
  Q=' ===== '
ENDIF
IF (A.EQ.2) THEN
  P='NEDBOJNING 1/4-PUNKTERNA'
  Q=' ===== '
ENDIF

```

```
IF (A.EQ.3) THEN
  P='TOJNING'
  Q='======'
  AE='TRYCK'
  AF='DRAG'
  AG='E-3 [mm]'
```

CALL GTX(5.,16.,AE)  
CALL GTX(190.,16.,AF)  
CALL GTX(170.,3.,AG)  
CALL GTX(96.,134.,G)  
CALL GTX(108.,134.,H)

```
ELSE
  CALL GTX(1.,134.,G)
  CALL GTX(13.,134.,H)
  CALL GTX(170.,124.,R)
  CALL GTX(170.,121.,S)
  DO 15 I=1,B
    WRITE(T,200) C1(I)
    WRITE(U,200) D1(I)
    IF (I.EQ.1) THEN
      CALL GTX(187.,124.,T)
      CALL GTX(187.,121.,U)
    ELSE
      CALL GTX(187.,112.,T)
      CALL GTX(187.,109.,U)
    ENDIF
  15 CONTINUE
ENDIF
IF (B.EQ.2) THEN
  CALL GTX(170.,118.,N)
  CALL GTX(170.,115.,O)
  WRITE(E,100) C(2)
  CALL GTX(178.,118.,E)
  CALL GTX(170.,112.,R)
  CALL GTX(170.,109.,S)
ENDIF
CALL GTX(25.,134.,P)
CALL GTX(25.,132.,Q)
100 FORMAT(I1)
200 FORMAT(F5.1)
RETURN
END
END
```