

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

**APLIKASI BERBASIS WEB UNTUK PEMBUATAN INPUT SRAC- COREBN/HIST  
PERHITUNGAN FRAKSI BAKAR RSG-GAS**

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**ABSTRAK**

**APLIKASI BERBASIS WEB UNTUK PEMBUATAN INPUT SRAC-COREBN/HIST PERHITUNGAN FRAKSI BAKAR RSG-GAS.** *Paket program SRAC (Standard Reactor Analisis Code) merupakan paket program komputer yang dapat digunakan untuk menganalisis parameter neutronik berbagai macam jenis dan bentuk teras reaktor, termasuk di dalamnya program COREBN/HIST untuk perhitungan fraksi bakar. File input dari SRAC-COREBN/HIST berbasis teks, untuk mempermudah dan mempercepat pembuatan input untuk perhitungan fraksi bakar bahan bakar RSG-GAS, maka disusun suatu aplikasi, aplikasi ini berbasis web dan user friendly.*

*Kata kunci: input, srac, fraksi bakar RSG-GAS, aplikasi, teks.*

**ABSTRACT**

**WEB BASE APPLICATION FOR MAKING RSG-GAS BURNUP SRAC-COREBN/HIST CALCULATION INPUT.** *SRAC program package (Standard Reactor Analisis Code) is a computer code package that can be used to analyze neutronic parameters in various types and forms of reactor core. Including COREBN/HIST for burn-up calculation. It's not easy to make text based SRAC-COREBN/HIST input file, this web based and user friendly application was built to make input SRAC-COREBN/HIST file for burn-up calculation at RSG-GAS to be easier.*

*Keywords: input, srac, RSG-GAS burn-up, application, text..*

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## I. PENDAHULUAN

File input SRAC-COREBN/HIST untuk perhitungan fraksi bakar bahan bakar RSG-GAS berbasis teks, untuk mempermudah pembuatan file input maka disusun aplikasi ini, untuk pembuatan input cukup dimasukkan data daya operasi (dalam MWD) dan file input dari teras sebelumnya.

## II TEORI

File input SRAC-COREBN/HIST pada teras sebelumnya diganti menjadi file input baru untuk teras berikutnya dengan perubahan jumlah jam operasi,, konfigurasi teras, pergeseran bahan bakar dan pemasukan bahan bakar baru (*fresh fuel*), sedangkan untuk daya operasi dibuat tetap yaitu 15 MW. Berikut file input srac pada teras ke 68.

```
#!/bin/csh
#
#####
#
#
# CRBN101.sh
#
#
#####
#
#####
#
# Fortran logical unit usage for COREBN
#
# [ ]:important files for users.
#
# 1 binary  scratch unit
# 2 binary  scratch unit
# 3 binary  scratch unit
# [ 5] text:80  standard input
# [ 6] text:137 standard output, message from COREBN
```

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```
# [ 9] binary  flux map file by option
# 10 binary  scratch unit
# 11 binary  scratch unit
# [13] binary  restart file(with 98th file) for CITATION by option
# 14 binary  scratch unit
# 15 binary  scratch unit for equation constants
#          high speed I/O unit is effective if possible
# 16 binary  scratch unit
# 18 binary  scratch unit
# 19 binary  scratch unit
# 26 binary  scratch unit
# 31 text:80  scratch unit
# [32] binary  power density map file by option
# 50 text:80  scratch unit
# 89 binary  scratch unit
# [90] binary  PS converted MACRO PDS file (read only)
# 91 text:80  scratch unit
# [92] binary  old history file to be read (read only)
# [93] binary  new history file to be written
# 94 text:80  scratch unit
# 95 text:80  scratch unit
# 96 binary  scratch unit
# 97 binary  scratch unit
# [98] binary  restart file(with 13th file) for COREBN by option
# [99] text:137 calculated results
#
#=====
#
alias mkdir mkdir
alias cat  cat
alias rm   rm
alias cd   cd
#
#===== Set by user =====
#
# LMN    : load module name
```

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```
#      = CRBNsc.30m(Scalar,30M), CRBNvp.50m(Vector,50M), ....
# ODR   : directory name in which all output data will be stored
# HTO   : directory and file name of old history (read only)
# HTN   : directory and file name of new history
# PSX   : directory and file name of PS converted MACRO (read only)
# CASE  : case name which is referred as names of output files
# WKDR  : directory name in which scratch PS files will be made and deleted
#
set HOME = /home/tukul/SRAC/DEFACTO
set HOME1 = /home/tukul
set LMN  = CRBN.100m
set ODR  = $HOME/outp
set HTO  = $HOME/rsg.eoc68
set HTN  = $HOME/rsg.eoc69
set PSX  = $HOME/macroPS2.dat
set CASE = TERAS-69
#
#===== Change if you like =====
#
set LM   = $HOME1/COREBN/bin/$LMN
set DATE = `date +%b%d.%H.%M.%S`
set WKDR = $HOME1/CRBNtmp.$CASE.$DATE
mkdir $WKDR
#
set OUTLST = $ODR/$CASE.CFT06
setenv fu99 $ODR/$CASE.CFT99
setenv fu90 $PSX
setenv fu92 $HTO
setenv fu93 $HTN
# setenv fu09 $ODR/$CASE.FLUX.dat
# setenv fu32 $ODR/$CASE.POWR.dat
# setenv fu13 $ODR/$CASE.REST1.dat
# setenv fu98 $ODR/$CASE.REST2.dat
#
#===== Exec COREBN code with the following input data =====
#
```

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cd \$WKDR

cat - << END\_DATA | \$LM >& \$OUTLST

RSG Core Burn-up Calculation (Burn-up Step = 11)

Rod Position : CR1 CR2 CR3 CR4 CR5 CR6 = 60 60 60 60 60 60

1 1 48 0 1 20070301 20070322 0 0 2 1 0 1 1 300.0 300.0 / BLOK-2

1049.9 0.0 / BLOK-3

15.0 15.0 / BLOK-4

SSB65 31 33 58 58 -5 -1 1 0

SSB64 16 18 58 58 -5 -1 1 0

SSB63 34 34 44 50 -5 -1 1 0

SSB62 34 34 23 29 -5 -1 1 0

SSB61 16 18 15 15 -5 -1 1 0

FSB06 19 21 26 26 -5 -1 1 0

SSB55 16 18 44 50 -5 -1 1 0

SSB54 15 15 44 50 -5 -1 1 0

SSB53 15 15 23 29 -5 -1 1 0

SSB52 19 21 58 58 -5 -1 1 0

SSB51 31 33 15 15 -5 -1 1 0

FSB05 28 30 47 47 -5 -1 1 0

SSB45 28 30 15 15 -5 -1 1 0

SSB44 16 18 51 57 -5 -1 1 0

SSB43 34 34 37 43 -5 -1 1 0

SSB42 31 33 23 29 -5 -1 1 0

SSB41 15 15 37 43 -5 -1 1 0

FSB04 19 21 47 47 -5 -1 1 0

SSB35 25 27 58 58 -5 -1 1 0

SSB34 19 21 37 43 -5 -1 1 0

SSB33 22 24 15 15 -5 -1 1 0

SSB32 28 30 30 36 -5 -1 1 0

SSB31 31 33 16 22 -5 -1 1 0

FSB03 28 30 26 26 -5 -1 1 0

SSB25 15 15 30 36 -5 -1 1 0

SSB24 34 34 30 36 -5 -1 1 0

SSB23 22 24 58 58 -5 -1 1 0

SSB22 28 30 58 58 -5 -1 1 0

SSB21 25 27 15 15 -5 -1 1 0

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FSB02 31 33 33 33 -5 -1 1 0  
SSB15 31 33 51 57 -5 -1 1 0  
SSB14 25 27 23 29 -5 -1 1 0  
SSB13 22 24 44 50 -5 -1 1 0  
SSB12 28 30 37 43 -5 -1 1 0  
SSB11 16 18 16 22 -5 -1 1 0  
FSB01 16 18 40 40 -5 -1 1 0  
SSA85 22 24 23 29 -5 -1 1 0  
SSA84 28 30 51 57 -5 -1 1 0  
SSA83 31 33 44 50 -5 -1 1 0  
SSA82 19 21 15 15 -5 -1 1 0  
SSA81 16 18 23 29 -5 -1 1 0  
FSA08 25 27 54 54 -5 -1 1 0  
SSA75 19 21 16 22 -5 -1 1 0  
SSA74 19 21 51 57 -5 -1 1 0  
SSA73 25 27 44 50 -5 -1 1 0  
SSA72 28 30 16 22 -5 -1 1 0  
SSA71 19 21 30 36 -5 -1 1 0  
FSA07 22 24 19 19 -5 -1 1 0 / Blok-5  
CIT2A0E0 / H2O  
R-SHROUD /  
5 39 5 5 -2  
5 5 6 62 -2  
39 39 6 13 -2  
38 39 14 14 -2  
14 14 62 62 -2  
5 14 63 63 -2  
0 0 0 0 0  
BE-BLOK1 /  
6 38 6 9 -1  
6 9 10 62 -1  
11 38 11 11 -1  
11 11 12 62 -1  
0 0 0 0 0  
BE-BLOK2 /  
10 38 10 10 0

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10 10 11 62 0

12 38 12 12 0

12 12 13 62 0

0 0 0 0 0

C-SHROUD /

14 37 14 14 -2

14 14 15 60 -2

37 37 15 60 -2

14 21 61 61 -2

25 37 61 61 -2

0 0 0 0 0

BE-ELEMN /

15 15 15 22 -4

34 36 15 15 -4

34 35 16 22 -4

35 35 23 50 -4

15 15 51 58 -4

15 21 59 60 -4

34 36 51 58 -4

25 36 59 60 -4

0 0 0 0 0

MODERAT1 /

16 18 30 36 -5

22 27 30 43 -5

22 24 51 57 -5

25 27 16 22 -5

31 33 37 43 -5

17 17 38 38 -5

17 17 42 42 -5

20 20 24 24 -5

20 20 28 28 -5

20 20 45 45 -5

20 20 49 49 -5

23 23 17 17 -5

23 23 21 21 -5

26 26 52 52 -5

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26 26 56 56 -5

29 29 24 24 -5

29 29 28 28 -5

29 29 45 45 -5

29 29 49 49 -5

32 32 31 31 -5

32 32 35 35 -5

0 0 0 0 0

HYRA-ELM /

36 36 16 43 -4

0 0 0 0 0

PNRS-ELM /

36 36 44 50 -4

0 0 0 0 0

PRTF--J7 /

22 24 59 59 0

0 0 0 0 0

PRTF--K7 /

22 24 60 60 0

0 0 0 0 0

CR-CLADD /

19 21 23 23 -5

19 19 24 24 -5

21 21 24 24 -5

19 21 25 25 -5

19 21 27 27 -5

19 19 28 28 -5

21 21 28 28 -5

19 21 29 29 -5

28 30 23 23 -5

28 28 24 24 -5

30 30 24 24 -5

28 30 25 25 -5

28 30 27 27 -5

28 28 28 28 -5

30 30 28 28 -5

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28 30 29 29 -5

31 33 30 30 -5

31 31 31 31 -5

33 33 31 31 -5

31 33 32 32 -5

31 33 34 34 -5

31 31 35 35 -5

33 33 35 35 -5

31 33 36 36 -5

16 18 37 37 -5

16 16 38 38 -5

18 18 38 38 -5

16 18 39 39 -5

16 18 41 41 -5

16 16 42 42 -5

18 18 42 42 -5

16 18 43 43 -5

19 21 44 44 -5

19 19 45 45 -5

21 21 45 45 -5

19 21 46 46 -5

19 21 48 48 -5

19 19 49 49 -5

21 21 49 49 -5

19 21 50 50 -5

28 30 44 44 -5

28 28 45 45 -5

30 30 45 45 -5

28 30 46 46 -5

28 30 48 48 -5

28 28 49 49 -5

30 30 49 49 -5

28 30 50 50 -5

0 0 0 0 0

ABSORBER /1

20 20 24 24 5

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Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

```
20 20 28 28 5
29 29 24 24 5
29 29 28 28 5
32 32 31 31 5
32 32 35 35 5
17 17 38 38 5
17 17 42 42 5
20 20 45 45 5
20 20 49 49 5
29 29 45 45 5
29 29 49 49 5
0 0 0 0 0
```

/ MATERIAL END

```
001
0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1
900 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1.5 0.5 0 0.0
```

```
003
0 0 0 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
```

15.0 1.000

```
024
1 3.421E-4
```

```
999
```

```
END_DATA
```

```
#
```

```
#===== Remove scratch PS files =====
```

```
#
```

```
cd $HOME
```

```
rm -r $WKDR
```

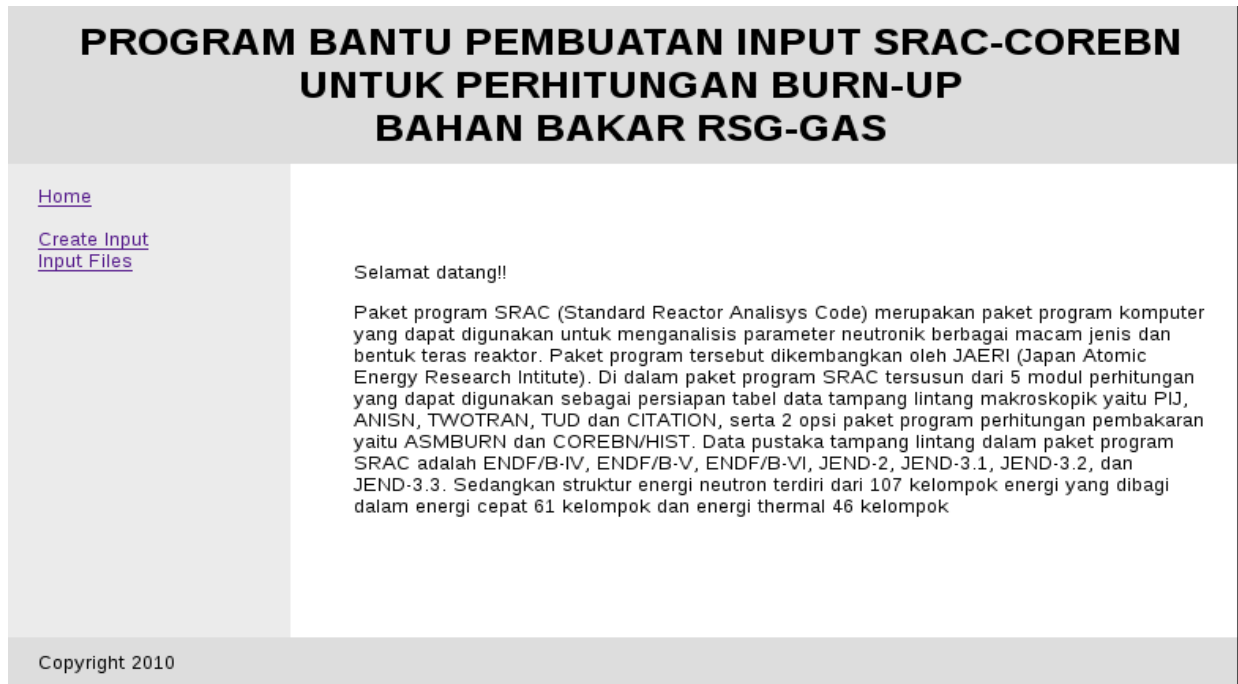
Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

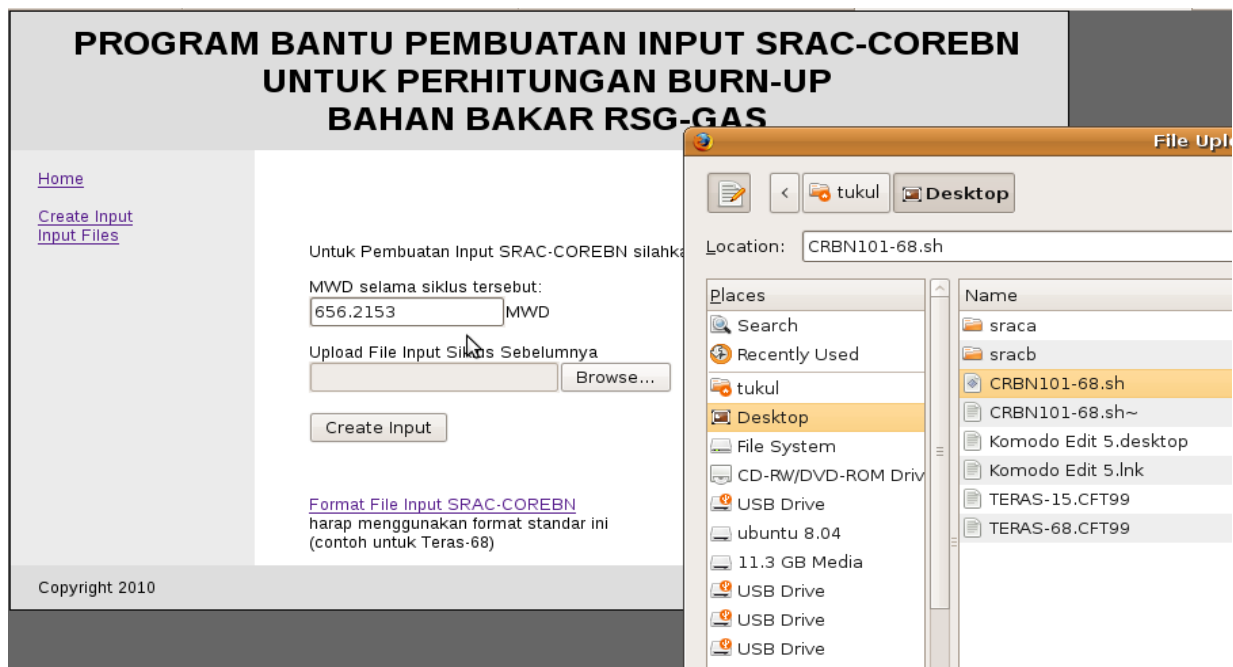
#### IV HASIL DAN PEMBAHASAN

Aplikasi ini berbasis web, untuk melihat versi demo dapat di buka di <http://www.jabatanfungsional.com/sraca/>,

berikut tampilan dari aplikasi tersebut:



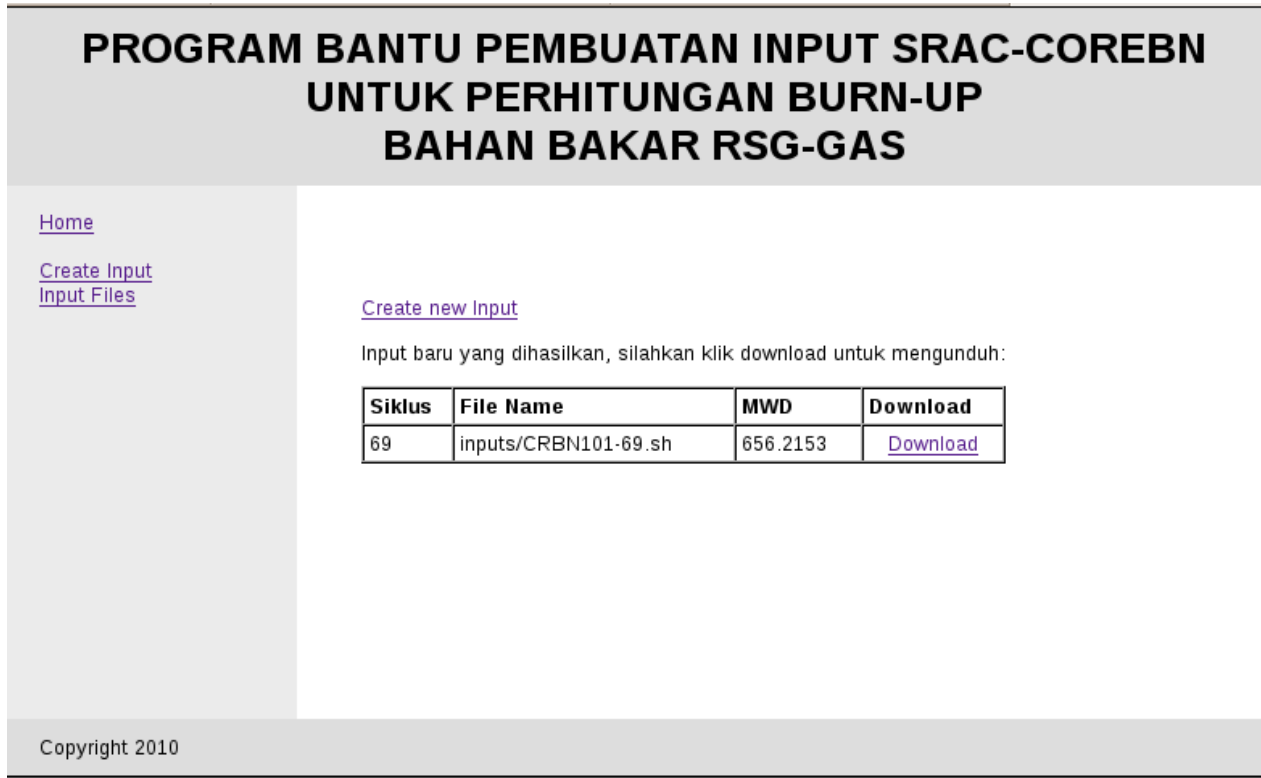
Gambar 1. Home Page.



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Gambar 2. Form Pembuatan *Input* (*Create Input*).



Gambar 3. Halaman Unduh (Hasil *Input* Baru)

Dengan input daya operasi 656.2153 MWD (teras 69) dan file input untuk teras ke 68 maka dihasilkan file input baru untuk teras ke 69 sebagai berikut:

```
#!/bin/csh
#
#####
#
#
# CRBN101.sh
#
#
#####
#
#####
```

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

```
#
# Fortran logical unit usage for COREBN
#
# [ ]:important files for users.
#
# 1 binary scratch unit
# 2 binary scratch unit
# 3 binary scratch unit
# [ 5] text:80 standard input
# [ 6] text:137 standard output, message from COREBN
# [ 9] binary flux map file by option
# 10 binary scratch unit
# 11 binary scratch unit
# [13] binary restart file(with 98th file) for CITATION by option
# 14 binary scratch unit
# 15 binary scratch unit for equation constants
# high speed I/O unit is effective if possible
# 16 binary scratch unit
# 18 binary scratch unit
# 19 binary scratch unit
# 26 binary scratch unit
# 31 text:80 scratch unit
# [32] binary power density map file by option
# 50 text:80 scratch unit
# 89 binary scratch unit
# [90] binary PS converted MACRO PDS file (read only)
# 91 text:80 scratch unit
# [92] binary old history file to be read (read only)
# [93] binary new history file to be written
# 94 text:80 scratch unit
# 95 text:80 scratch unit
# 96 binary scratch unit
# 97 binary scratch unit
# [98] binary restart file(with 13th file) for COREBN by option
# [99] text:137 calculated results
#
```

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Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

```
#=====
#
alias mkdir mkdir
alias cat cat
alias rm rm
alias cd cd
#
#===== Set by user =====
#
# LMN : load module name
#      = CRBNsc.30m(Scalar,30M), CRBNvp.50m(Vector,50M), ....
# ODR : directory name in which all output data will be stored
# HTO : directory and file name of old history (read only)
# HTN : directory and file name of new history
# PSX : directory and file name of PS converted MACRO (read only)
# CASE : case name which is referred as names of output files
# WKDR : directory name in which scratch PS files will be made and deleted
#
set HOME = /home/tukul/SRAC/DEFACTO
set HOME1 = /home/tukul
set LMN = CRBN.100m
set ODR = $HOME/outp
set HTO = $HOME/rsg.eoc68
set HTN = $HOME/rsg.eoc69
set PSX = $HOME/macroPS2.dat
set CASE = TERAS-69
#
#===== Change if you like =====
#
set LM = $HOME1/COREBN/bin/$LMN
set DATE = `date +%b%d.%H.%M.%S`
set WKDR = $HOME1/CRBNtmp.$CASE.$DATE
mkdir $WKDR
#
set OUTLST = $ODR/$CASE.CFT06
setenv fu99 $ODR/$CASE.CFT99
```

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Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

```
setenv fu90 $PSX
setenv fu92 $HTO
setenv fu93 $HTN
# setenv fu09 $ODR/$CASE.FLUX.dat
# setenv fu32 $ODR/$CASE.POWR.dat
# setenv fu13 $ODR/$CASE.REST1.dat
# setenv fu98 $ODR/$CASE.REST2.dat
#
#===== Exec COREBN code with the following input data =====
#
cd $WKDR
cat - << END_DATA | $LM >& $OUTLST
RSG Core Burn-up Calculation (Burn-up Step = 11)
Rod Position : CR1 CR2 CR3 CR4 CR5 CR6 = 60 60 60 60 60 60
1 1 48 0 1 20070301 20070322 0 0 2 1 0 1 1 300.0 300.0 / BLOK-2
1049.9 0.0 / BLOK-3
15.0 15.0 / BLOK-4
SSB65 31 33 58 58 -5 -1 1 0
SSB64 16 18 58 58 -5 -1 1 0
SSB63 34 34 44 50 -5 -1 1 0
SSB62 34 34 23 29 -5 -1 1 0
SSB61 16 18 15 15 -5 -1 1 0
FSB06 19 21 26 26 -5 -1 1 0
SSB55 16 18 44 50 -5 -1 1 0
SSB54 15 15 44 50 -5 -1 1 0
SSB53 15 15 23 29 -5 -1 1 0
SSB52 19 21 58 58 -5 -1 1 0
SSB51 31 33 15 15 -5 -1 1 0
FSB05 28 30 47 47 -5 -1 1 0
SSB45 28 30 15 15 -5 -1 1 0
SSB44 16 18 51 57 -5 -1 1 0
SSB43 34 34 37 43 -5 -1 1 0
SSB42 31 33 23 29 -5 -1 1 0
SSB41 15 15 37 43 -5 -1 1 0
FSB04 19 21 47 47 -5 -1 1 0
SSB35 25 27 58 58 -5 -1 1 0
```

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Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

SSB34 19 21 37 43 -5 -1 1 0  
SSB33 22 24 15 15 -5 -1 1 0  
SSB32 28 30 30 36 -5 -1 1 0  
SSB31 31 33 16 22 -5 -1 1 0  
FSB03 28 30 26 26 -5 -1 1 0  
SSB25 15 15 30 36 -5 -1 1 0  
SSB24 34 34 30 36 -5 -1 1 0  
SSB23 22 24 58 58 -5 -1 1 0  
SSB22 28 30 58 58 -5 -1 1 0  
SSB21 25 27 15 15 -5 -1 1 0  
FSB02 31 33 33 33 -5 -1 1 0  
SSB15 31 33 51 57 -5 -1 1 0  
SSB14 25 27 23 29 -5 -1 1 0  
SSB13 22 24 44 50 -5 -1 1 0  
SSB12 28 30 37 43 -5 -1 1 0  
SSB11 16 18 16 22 -5 -1 1 0  
FSB01 16 18 40 40 -5 -1 1 0  
SSA85 22 24 23 29 -5 -1 1 0  
SSA84 28 30 51 57 -5 -1 1 0  
SSA83 31 33 44 50 -5 -1 1 0  
SSA82 19 21 15 15 -5 -1 1 0  
SSA81 16 18 23 29 -5 -1 1 0  
FSA08 25 27 54 54 -5 -1 1 0  
SSA75 19 21 16 22 -5 -1 1 0  
SSA74 19 21 51 57 -5 -1 1 0  
SSA73 25 27 44 50 -5 -1 1 0  
SSA72 28 30 16 22 -5 -1 1 0  
SSA71 19 21 30 36 -5 -1 1 0  
FSA07 22 24 19 19 -5 -1 1 0 / Blok-5  
CIT2A0E0 / H2O  
R-SHROUD /  
5 39 5 5 -2  
5 5 6 62 -2  
39 39 6 13 -2  
38 39 14 14 -2  
14 14 62 62 -2

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Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

5 14 63 63 -2

0 0 0 0 0

BE-BLOK1 /

6 38 6 9 -1

6 9 10 62 -1

11 38 11 11 -1

11 11 12 62 -1

0 0 0 0 0

BE-BLOK2 /

10 38 10 10 0

10 10 11 62 0

12 38 12 12 0

12 12 13 62 0

0 0 0 0 0

C-SHROUD /

14 37 14 14 -2

14 14 15 60 -2

37 37 15 60 -2

14 21 61 61 -2

25 37 61 61 -2

0 0 0 0 0

BE-ELEMN /

15 15 15 22 -4

34 36 15 15 -4

34 35 16 22 -4

35 35 23 50 -4

15 15 51 58 -4

15 21 59 60 -4

34 36 51 58 -4

25 36 59 60 -4

0 0 0 0 0

MODERATI /

16 18 30 36 -5

22 27 30 43 -5

22 24 51 57 -5

25 27 16 22 -5

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Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

31 33 37 43 -5

17 17 38 38 -5

17 17 42 42 -5

20 20 24 24 -5

20 20 28 28 -5

20 20 45 45 -5

20 20 49 49 -5

23 23 17 17 -5

23 23 21 21 -5

26 26 52 52 -5

26 26 56 56 -5

29 29 24 24 -5

29 29 28 28 -5

29 29 45 45 -5

29 29 49 49 -5

32 32 31 31 -5

32 32 35 35 -5

0 0 0 0 0

HYRA-ELM /

36 36 16 43 -4

0 0 0 0 0

PNRS-ELM /

36 36 44 50 -4

0 0 0 0 0

PRTF--J7 /

22 24 59 59 0

0 0 0 0 0

PRTF--K7 /

22 24 60 60 0

0 0 0 0 0

CR-CLADD /

19 21 23 23 -5

19 19 24 24 -5

21 21 24 24 -5

19 21 25 25 -5

19 21 27 27 -5

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

19 19 28 28 -5

21 21 28 28 -5

19 21 29 29 -5

28 30 23 23 -5

28 28 24 24 -5

30 30 24 24 -5

28 30 25 25 -5

28 30 27 27 -5

28 28 28 28 -5

30 30 28 28 -5

28 30 29 29 -5

31 33 30 30 -5

31 31 31 31 -5

33 33 31 31 -5

31 33 32 32 -5

31 33 34 34 -5

31 31 35 35 -5

33 33 35 35 -5

31 33 36 36 -5

16 18 37 37 -5

16 16 38 38 -5

18 18 38 38 -5

16 18 39 39 -5

16 18 41 41 -5

16 16 42 42 -5

18 18 42 42 -5

16 18 43 43 -5

19 21 44 44 -5

19 19 45 45 -5

21 21 45 45 -5

19 21 46 46 -5

19 21 48 48 -5

19 19 49 49 -5

21 21 49 49 -5

19 21 50 50 -5

28 30 44 44 -5

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

```
28 28 45 45 -5
30 30 45 45 -5
28 30 46 46 -5
28 30 48 48 -5
28 28 49 49 -5
30 30 49 49 -5
28 30 50 50 -5
0 0 0 0 0
ABSORBER /1
20 20 24 24 5
20 20 28 28 5
29 29 24 24 5
29 29 28 28 5
32 32 31 31 5
32 32 35 35 5
17 17 38 38 5
17 17 42 42 5
20 20 45 45 5
20 20 49 49 5
29 29 45 45 5
29 29 49 49 5
0 0 0 0 0
      / MATERIAL END
001
0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0
1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 1
900 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1.5   0.5   0   0.0
003
0 0 0 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0
      15.0           1.000
024
1 3.421E-4
999
END_DATA
```

Demo Aplikasi: <http://www.jabatanfungsional.com/sraca/>

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```
#  
#===== Remove scratch PS files =====  
#  
cd $HOME  
rm -r $WKDR
```

## V. KESIMPULAN

Pembuatan aplikasi ini telah berhasil dengan menguji coba untuk pembuatan input SRAC-COREBN/HIST untuk teras ke 69 dengan input berupa daya input 656.2153 MWD dan file input teras ke 68. untuk menguji lebih jauh kinerja dari aplikasi ini maka perlu dilakukan beberapa kali penggunaan untuk teras-teras berikutnya.

## VI. DAFTAR PUSTAKA

Susilo, Jati, "Materi Pelatihan Internal Penggunaan Program SRAC untuk Perhitungan Neutronik Teras Reaktor", PTRKN-BATAN, Jakarta, 2009.

[www.codeigniter.com](http://www.codeigniter.com)

[www.codeigniter.com/forums](http://www.codeigniter.com/forums)

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