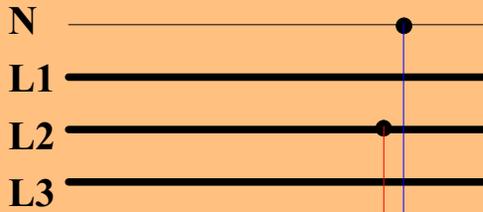


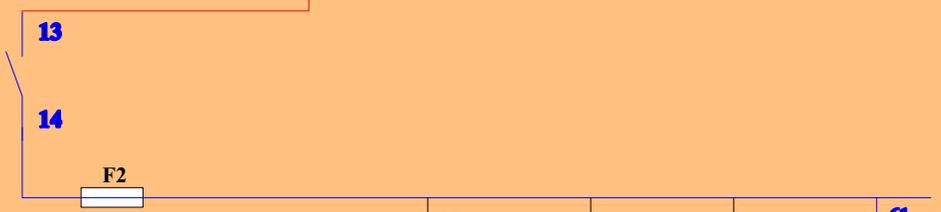
Demarrage direct

Grafset autre écriture

Etude de la marche normale



**Présence d'une tension
Mise Sous Tension (MST)**



"B"

Grafctet de F onctionnement Normal (GFN):

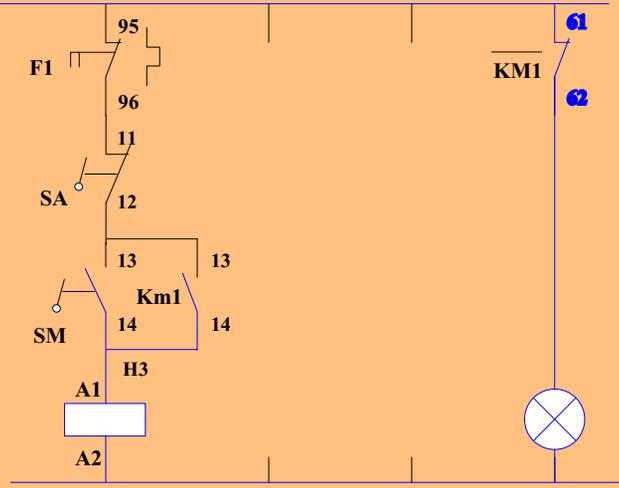


"GFN"

— Condition initiales de démarrage



"B"



KM1 H1 H2 H3



Sectionneur fermé

-Q1



"B"

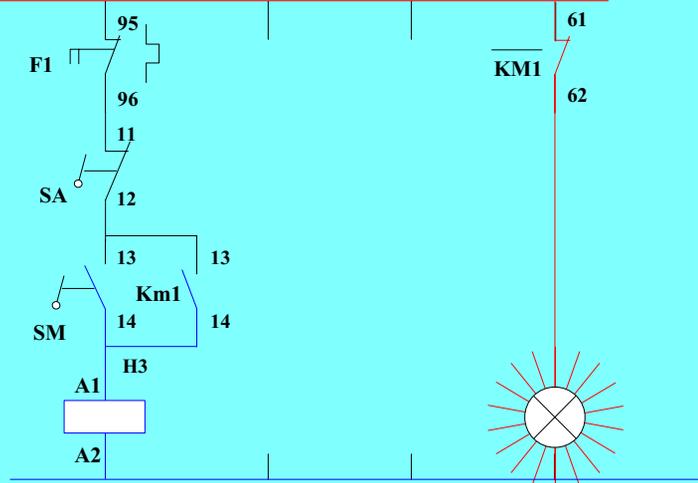
10

"GFN"

MST . Q1

11

Voyant de MST du moteur allumé

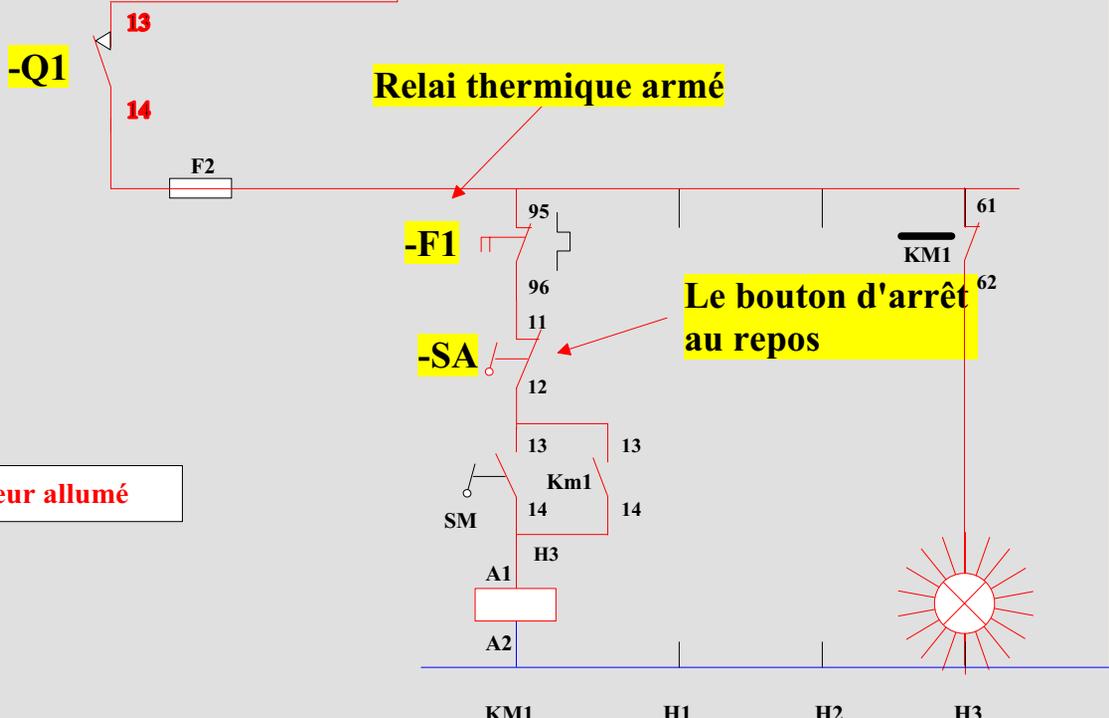
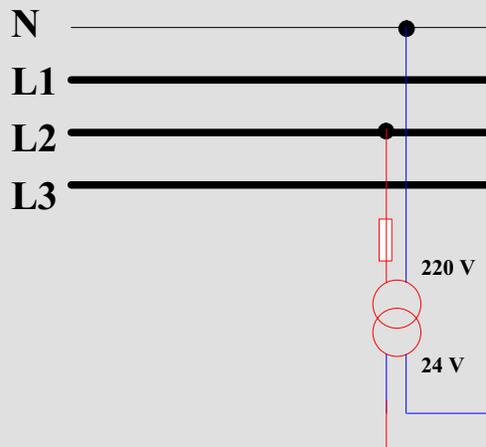


KM1

H1

H2

H3



"B"

10

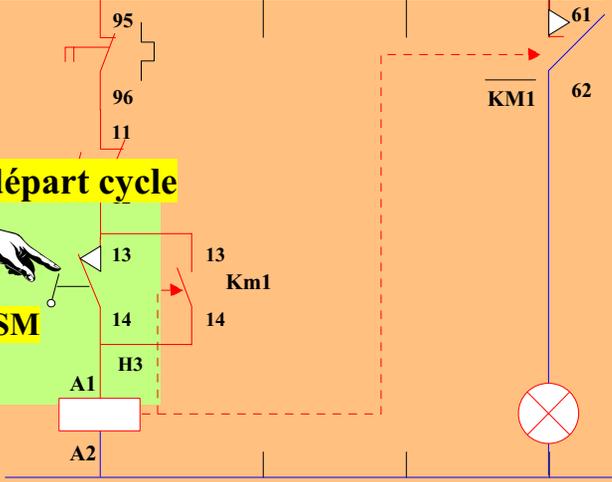
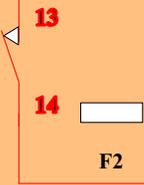
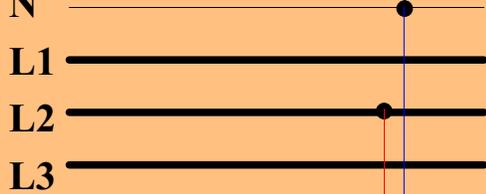
"GFN"

MST . Q1 . $\overline{F1}$. \overline{SA}

11

Voyant de MST du moteur allumé

"B"



Action sur le départ cycle



"B"

10

"GFN"

- MST . Q1 . F1 . SA

11

Voyant de MST du moteur allumé

12

Rotation du moteur

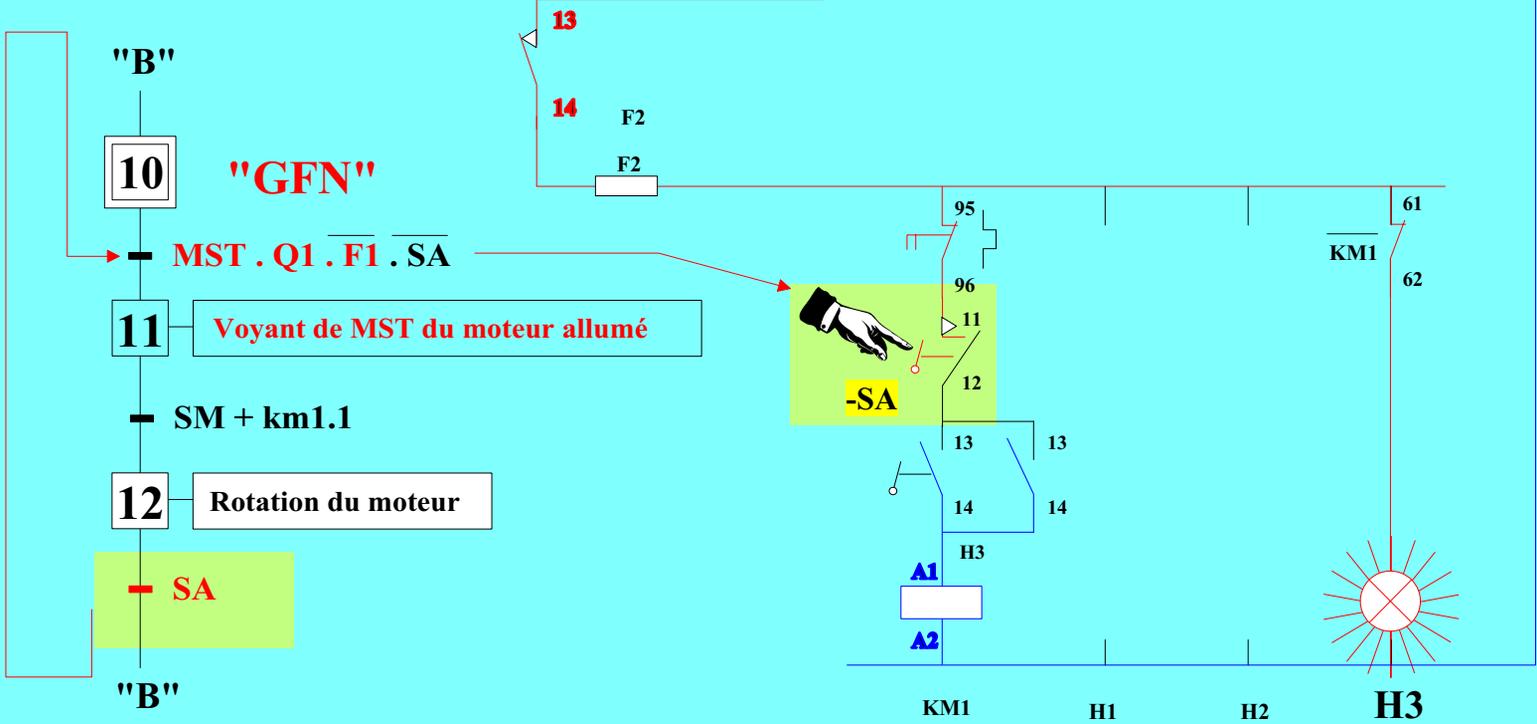
SM Condition de démarrage

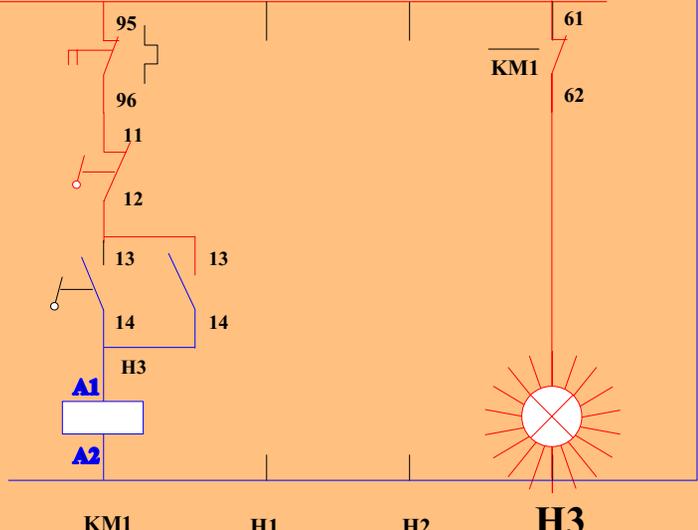
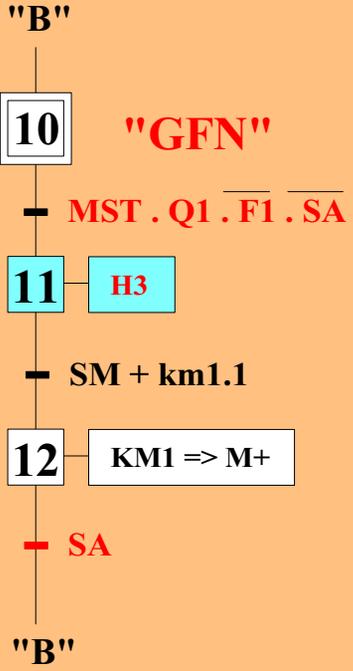
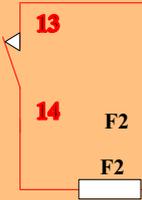
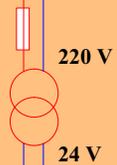
KM1

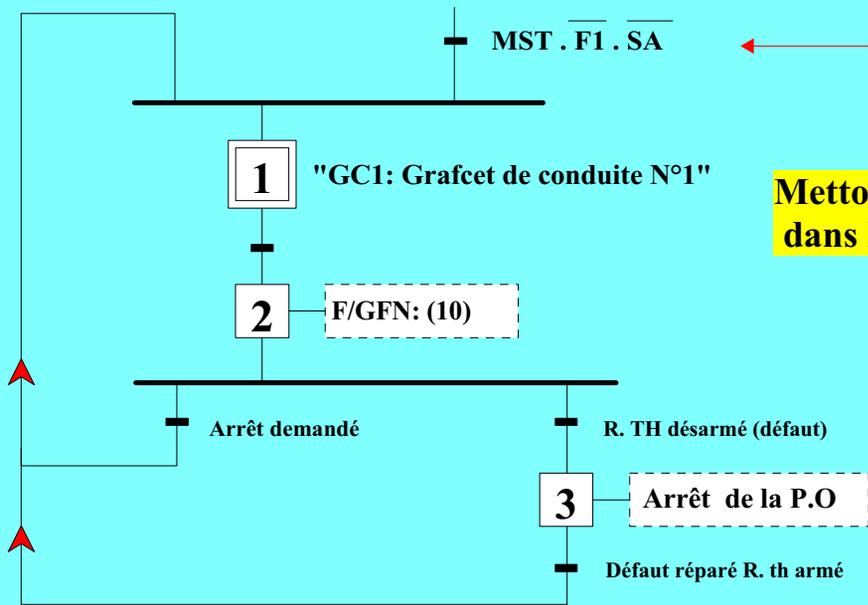
H1

H2

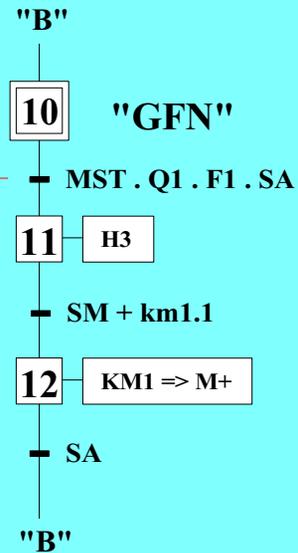
H3







Mettons les conditions initiales dans le grafcet de conduite

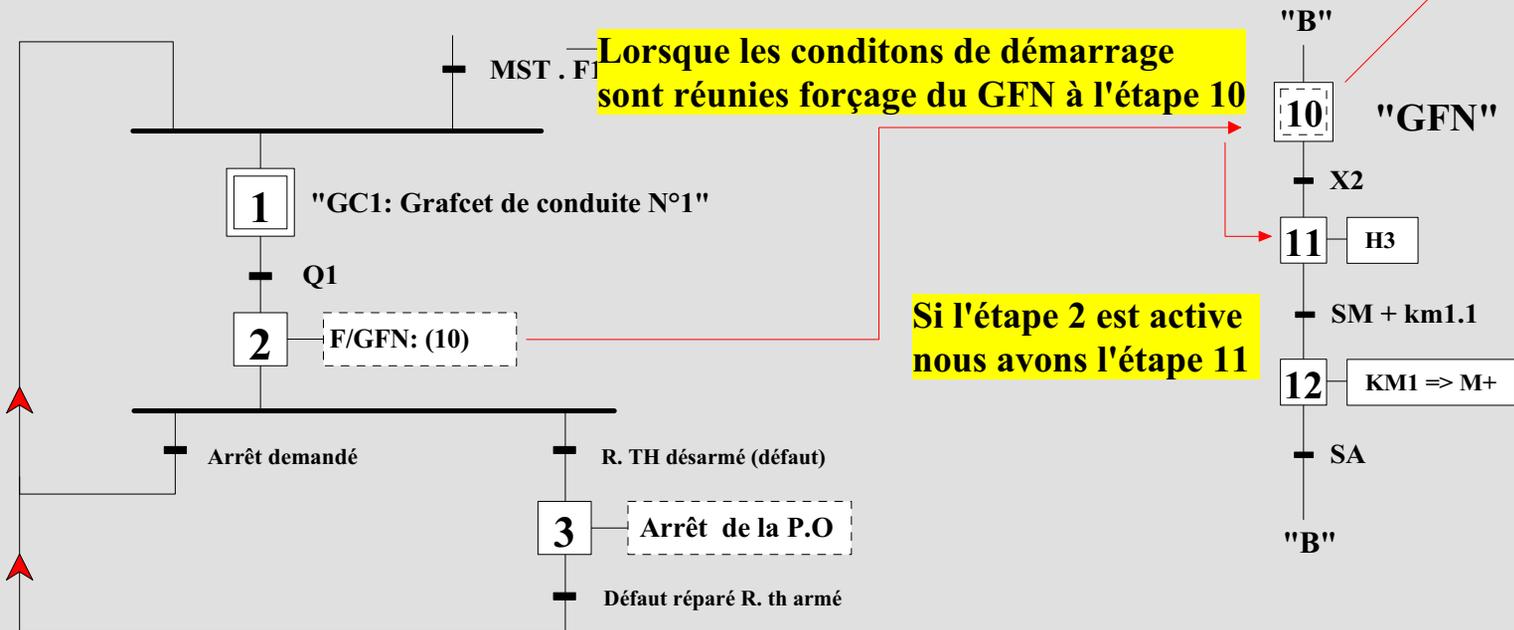


F/GFN: (10)

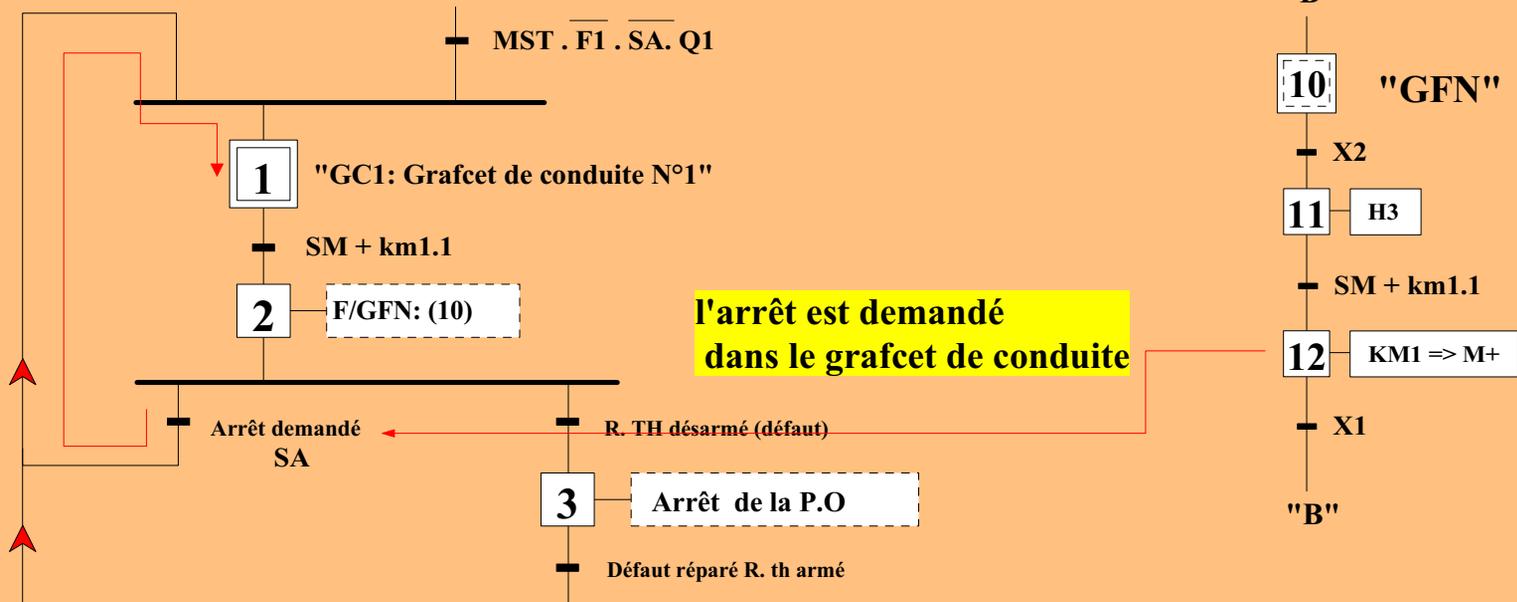
Un pointillé entoure l'étape car le forçage est un ordre interne

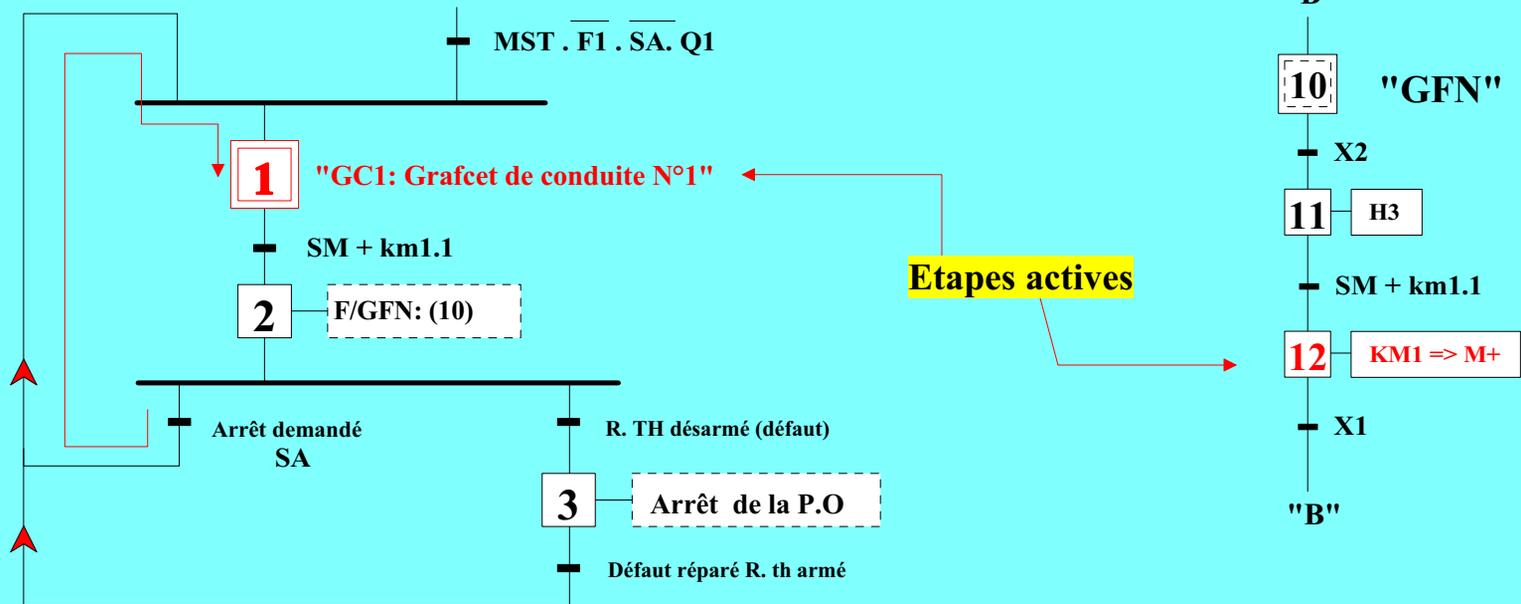
10

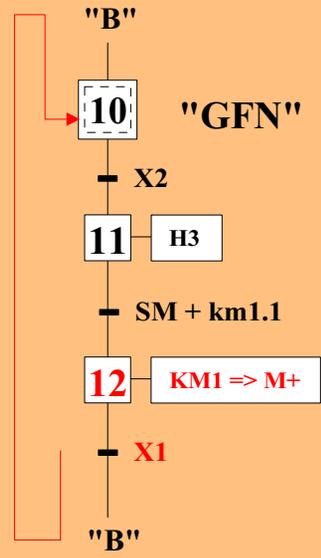
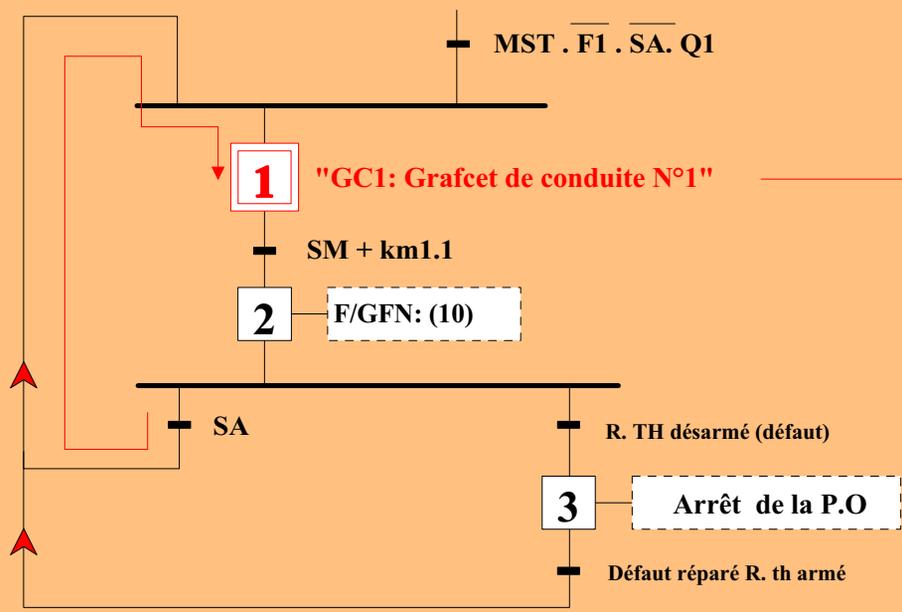
Le pointillé signifie étape forçable à partir d'un autre grafcet



Le grafcet de conduite boucle sur l'étape 1

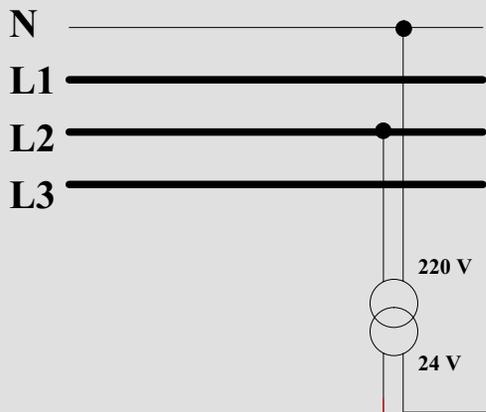




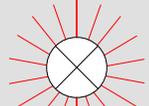
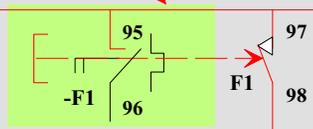


Dire que l'étape est active permet de boucler le GFN

Etude de l'arrêt par le relai thermique



**Le contact s'ouvre
Désactivation de KM1
Le moteur s'arrête**



KM1

H1

"C"

20

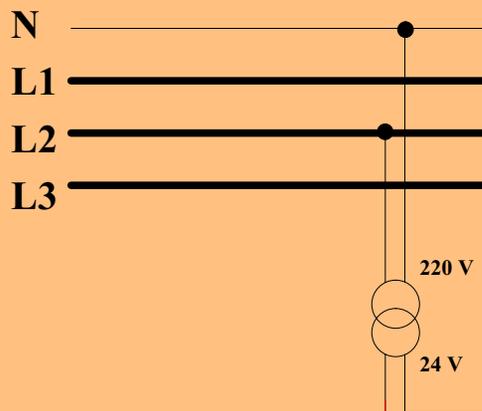
"GFD"

Relai thermique disjoncté

21

Voyant R. TH H1 éclairé

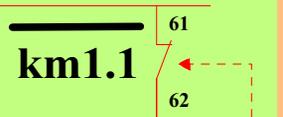
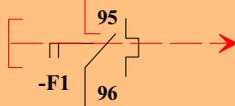
"défaut relais thermique"



KM1 au repos
le voyant H3 s'allume

13
14

F2



"C"

20

"GFD"



Relai thermique disjoncté

21

Voyant R. TH H1 éclairé

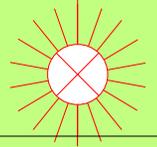
"défaut relais thermique"

Voyant H3 éclairé

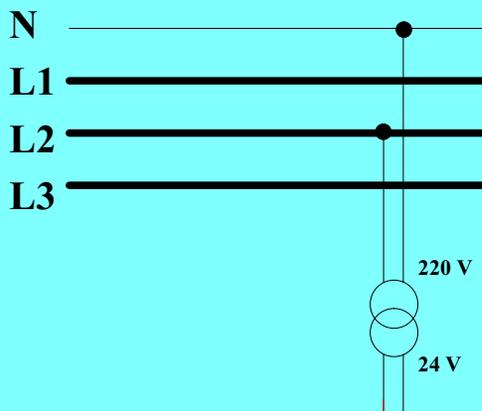
"machine sous tension"



KM1



H3



"C"

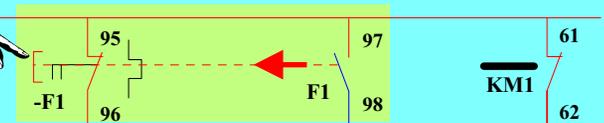
KM1 au repos
le voyant H3 s'allume

20

"GFD"

13
14

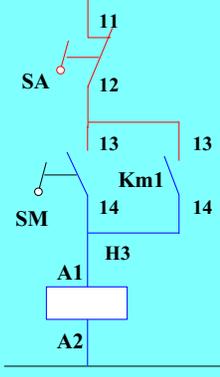
F2



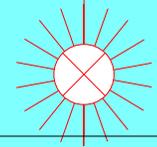
Relai thermique disjoncté

21

Voyant R. TH H1 éclairé "défaut relais thermique"
Voyant H3 éclairé "machine sous tension"



H1



H3

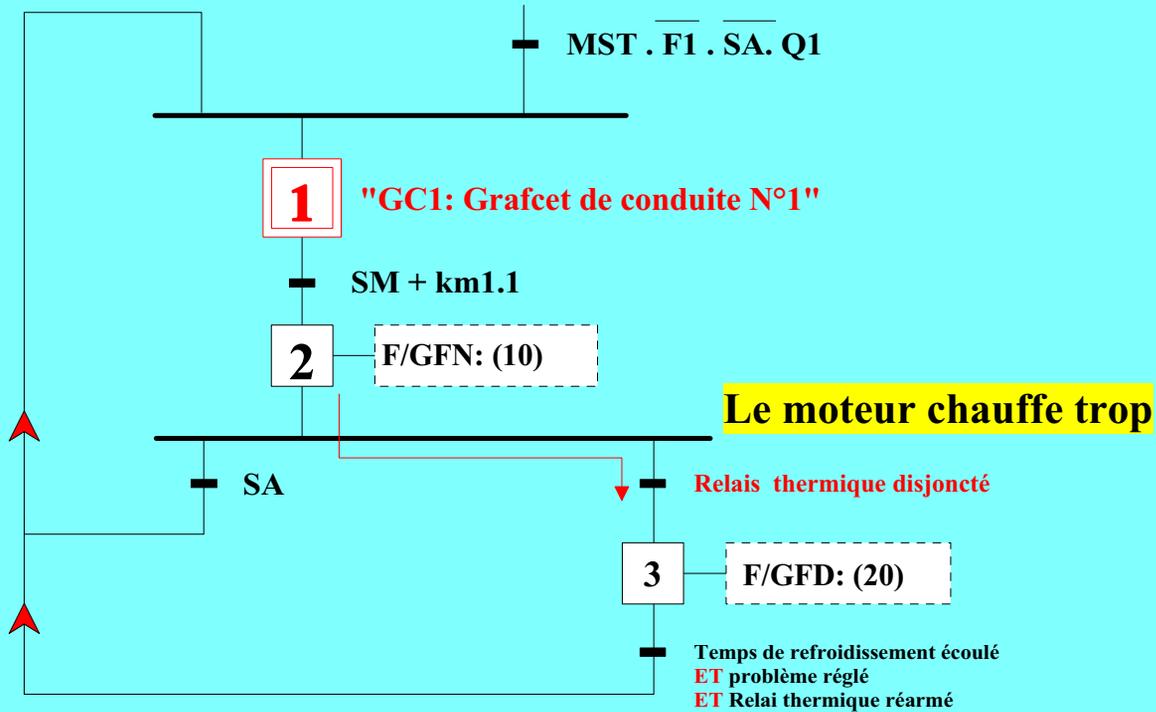
Temps de refroidissement écoulé
ET problème réglé
ET Relai thermique réarmé

"C"

KM1

Le relai thermique disjoncte quand il y a:

- Coupure ou déséquilibre de phases
- Calage du moteur
- Démarrage trop long
- Surcharge du moteur



MST . F1 . SA . Q1

1

"GC1: Grafcet de conduite N°1"

SM + km1.1

2

F/GFN: (10)

SA

Relais thermique disjoncté

3

F/GFD: (20)

Temps de refroidissement écoulé
ET problème réglé
ET Relai thermique réarmé

Forçage du grafcet de défaut

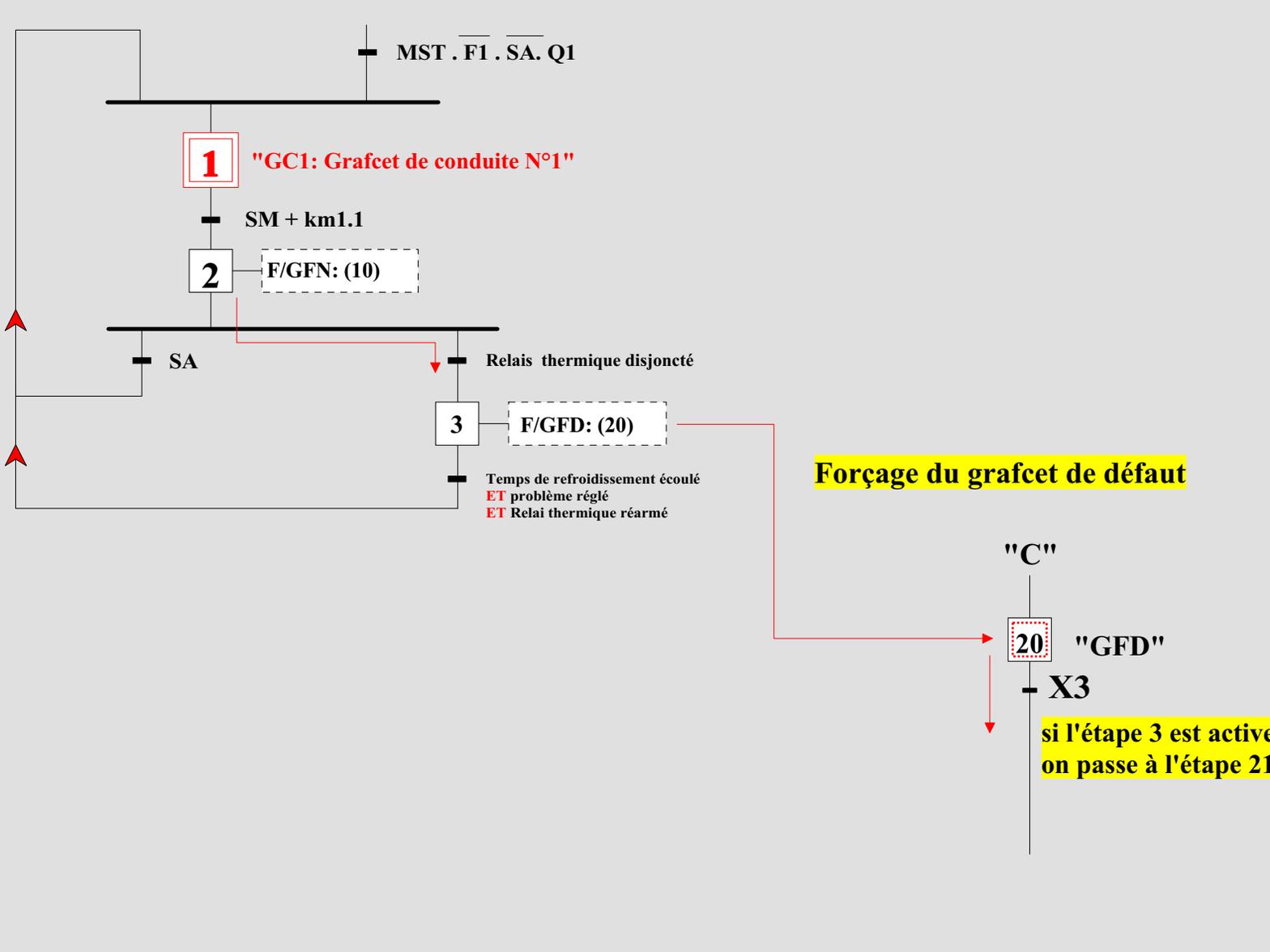
"C"

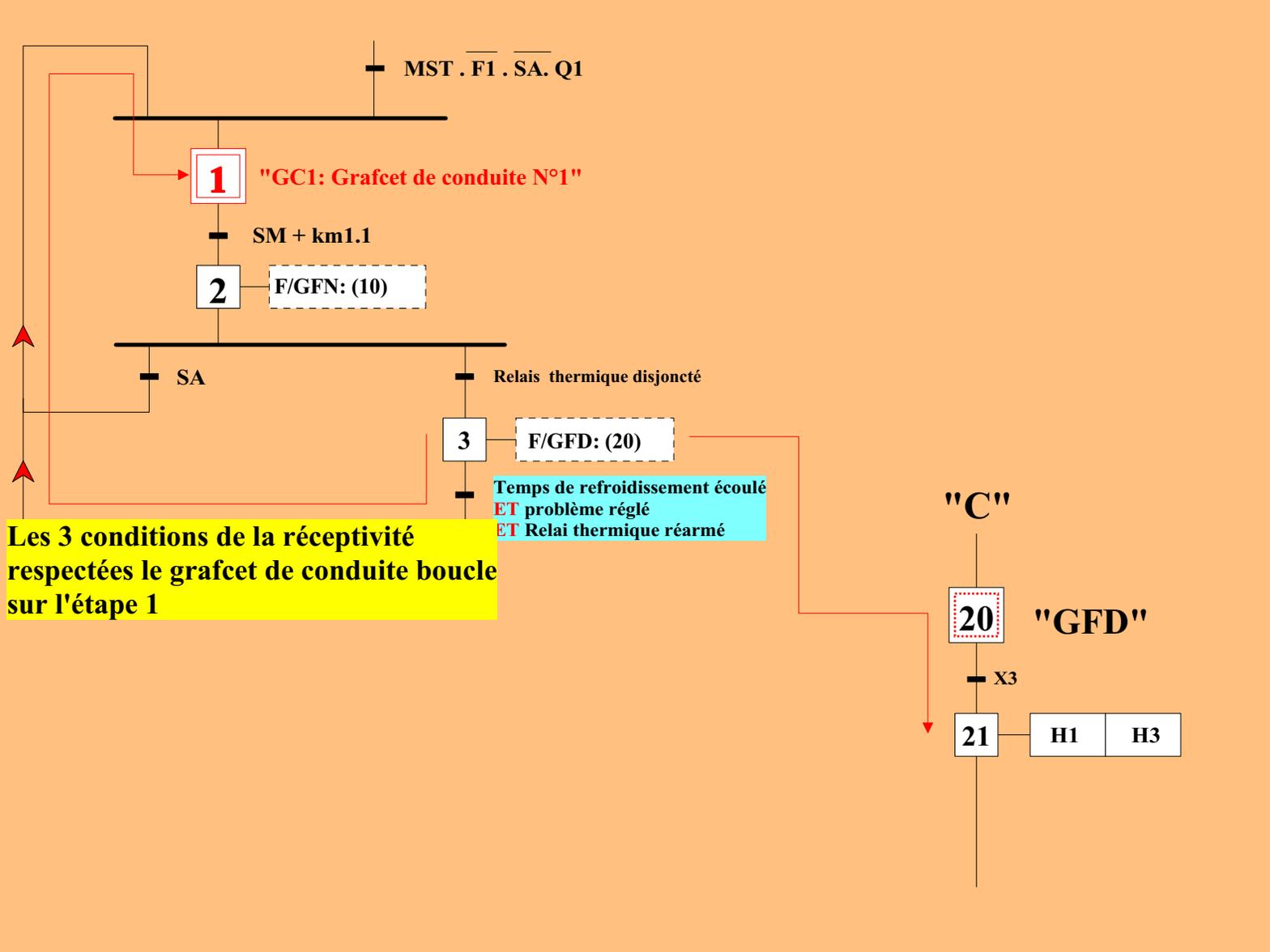
20

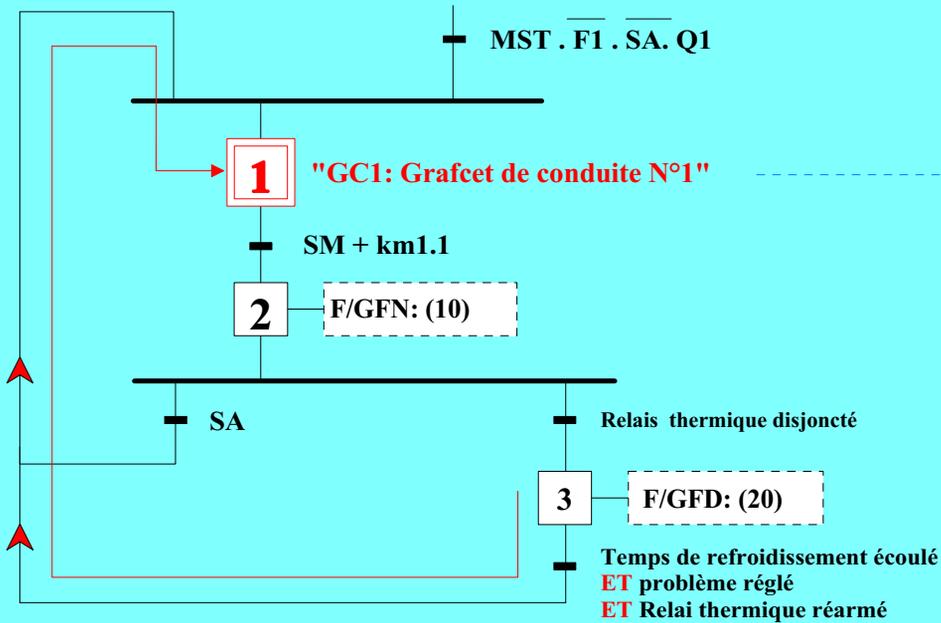
"GFD"

X3

si l'étape 3 est active
on passe à l'étape 21



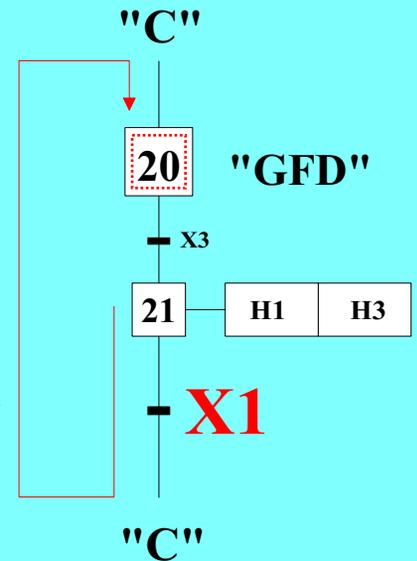




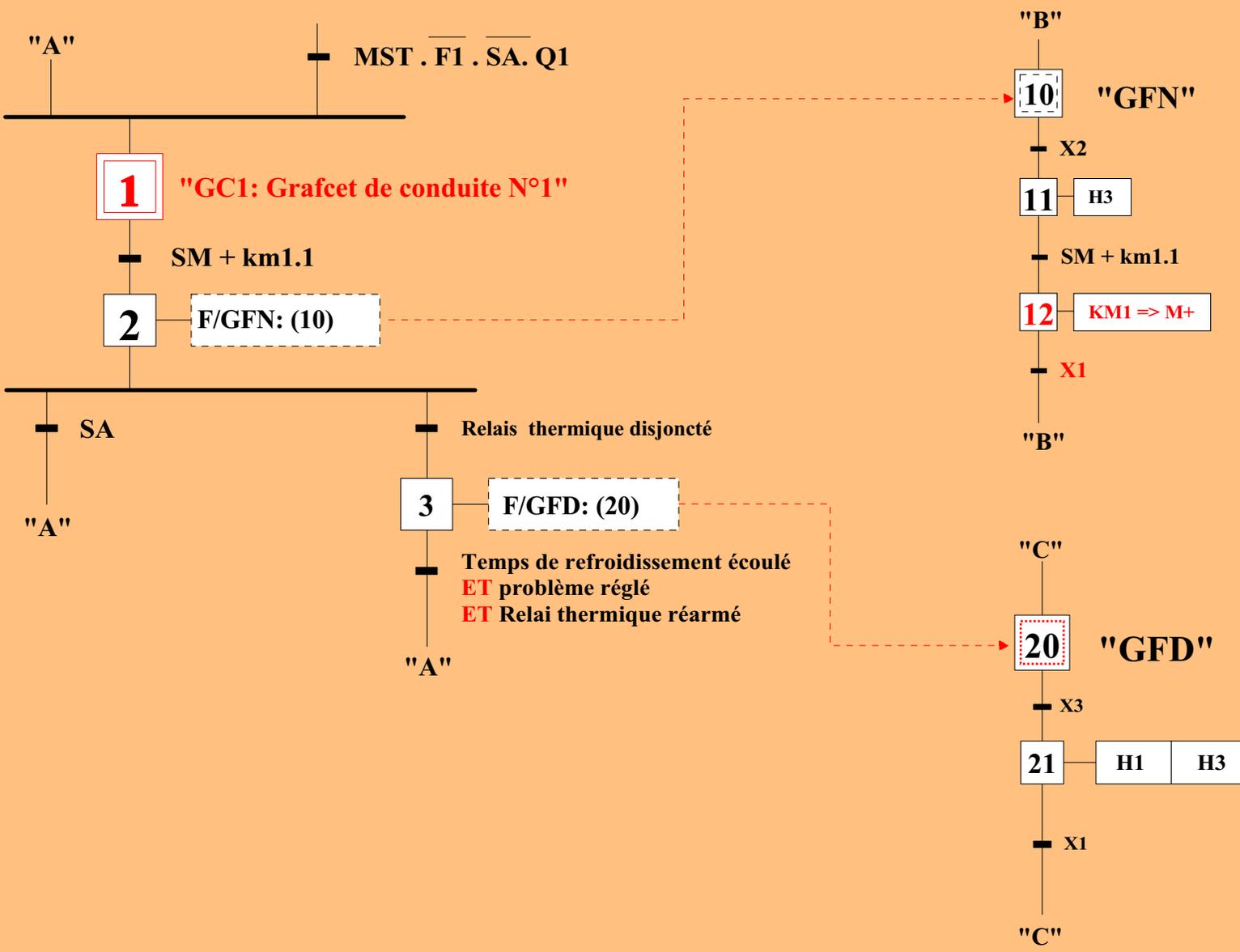
1 "GCI: Grafcet de conduite N°1"

2 F/GFN: (10)

3 F/GFD: (20)



L' étape 1 étant active GFD peut boucler



FIN