```
htype_definition_wd  THM

⊢  ∀'b,'a:S.
|  all
|  (λP:'a → hbool. all
|                   (λrep:'b
|                    → 'a. equal
|                           (type_definition(P,rep)
|                           ,and
|                            (all
|                             (λx':'b. all
|                                      (λx'':'b. implies
|                                                (equal
|                                                 (rep(x')
|                                                 ,rep(x''))
|                                                ,equal(x',x''))))
|                            ,all
|                             (λx:'a. equal
|                                     (P(x)
|                                     ,exists
|                                      (λx':'b. equal
|                                               (x
|                                               ,rep(x'))))))))
| by Simpsetp [‘hol_to_nuprl‘] THEN StrongAuto
|
1. 'b : S
2. 'a : S
3. P : 'a→𝔹
4. rep : 'b→'a
⊢  (↓_b type_definition('a;'b;P;rep))
   =
   ((∀_b x',x'':'b.  ((rep(x')) =_b (rep(x'')))⇒_2(x' =_b x''))∧_2
    (∀_b x:'a. ((P(x)) =_b (∃_b x':'b. (x =_b (rep(x')))))))
  by Unab [‘type_definition‘] THEN Simpsetp [‘bequal‘] THEN StrongAuto
     THEN
     Try HypBackchain
     THEN
     StrongAuto
END
```